

ALGORITHM 1 FLOW CHART, CONTINUED

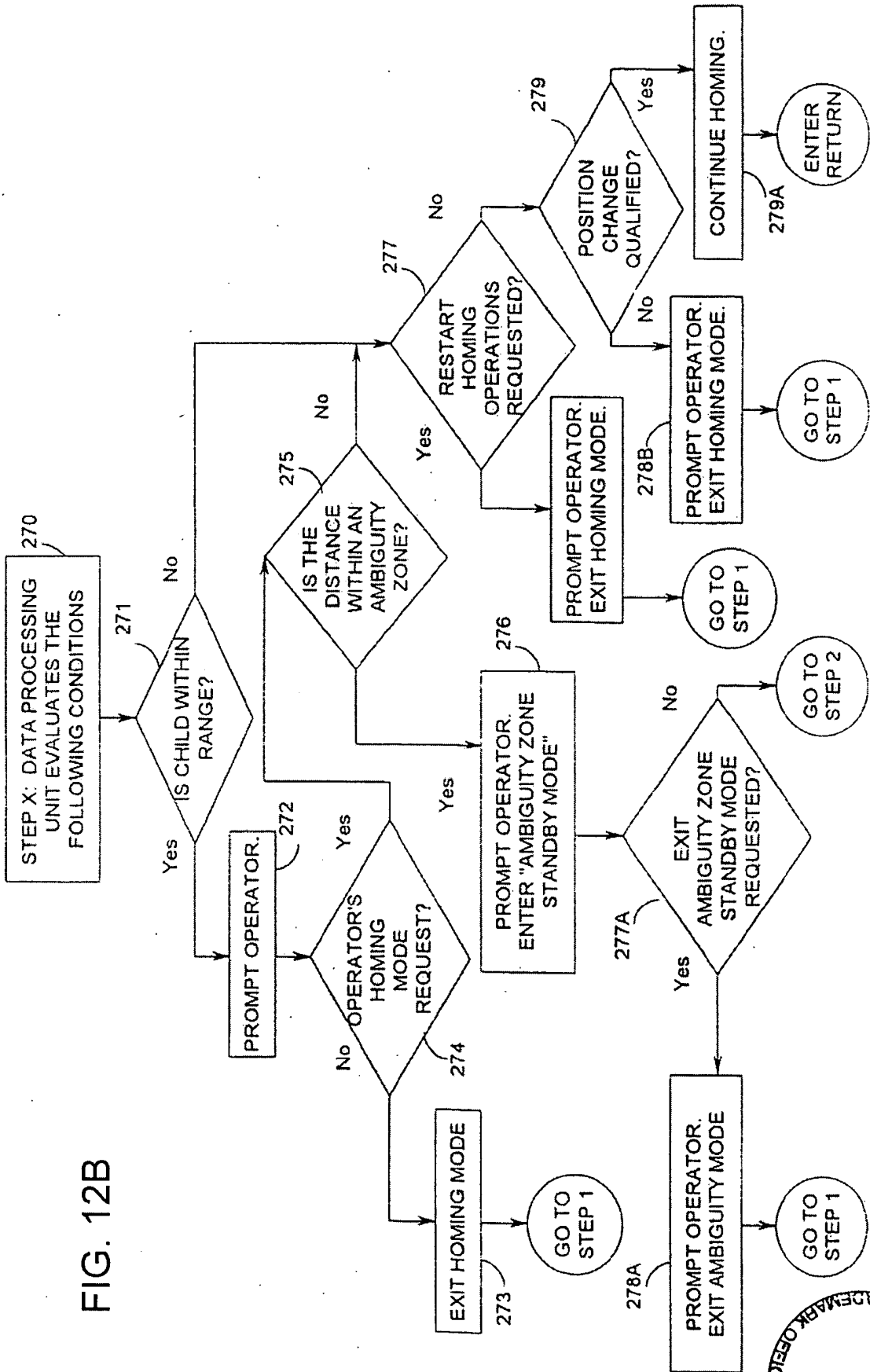
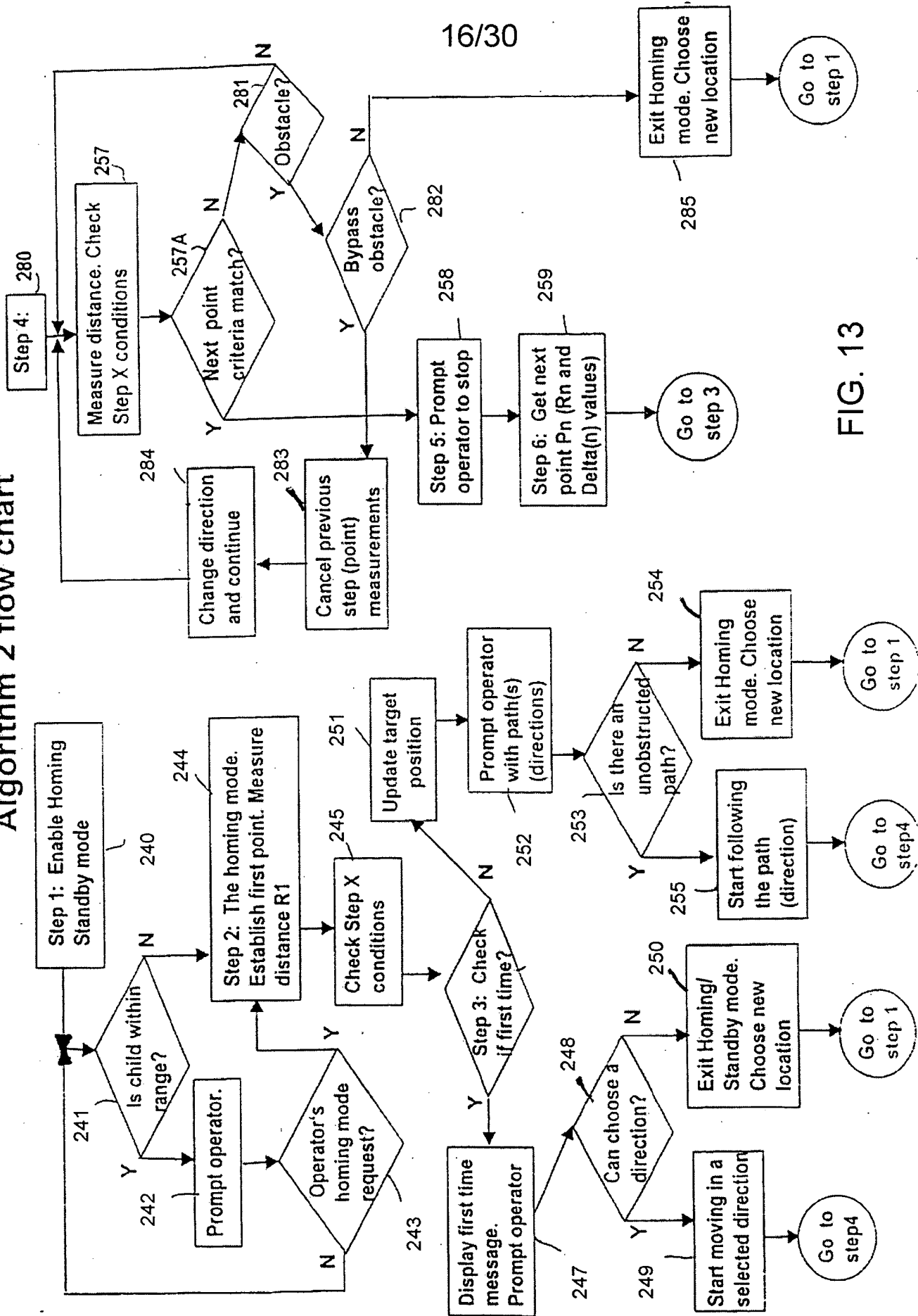


FIG. 12B



Algorithm 2 flow chart



Algorithm 3 flow chart

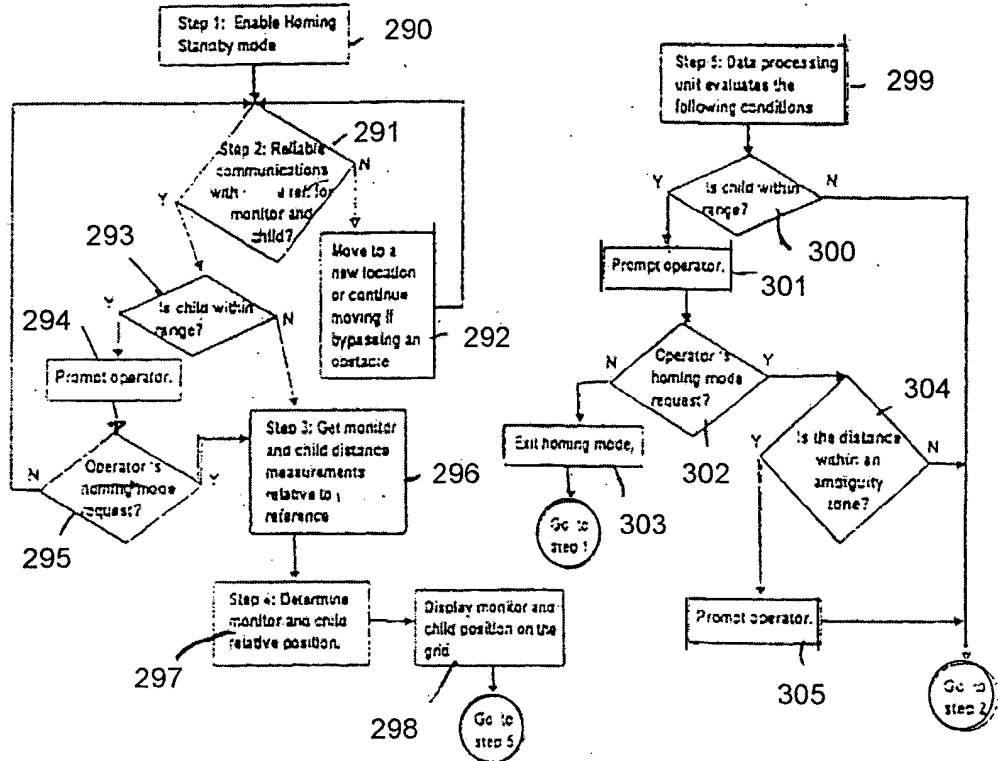


FIG. 14

Algorithm 1 homing

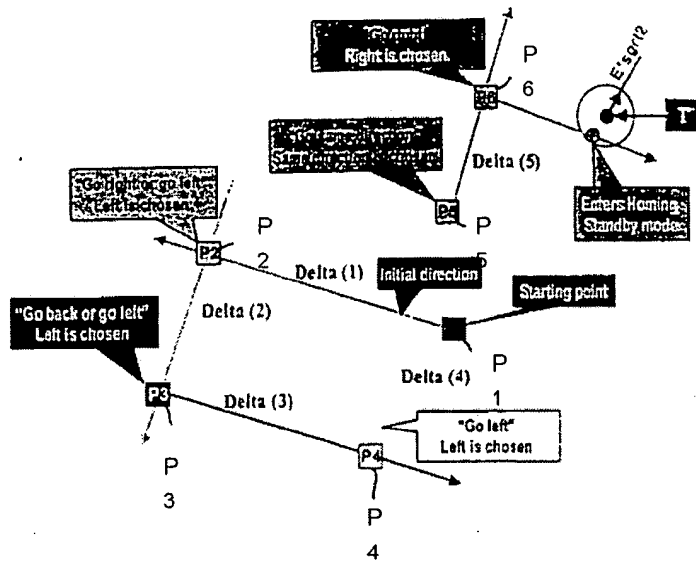


FIG. 15

Algorithm 3 homing. Three stationary monitors example - fixed reference

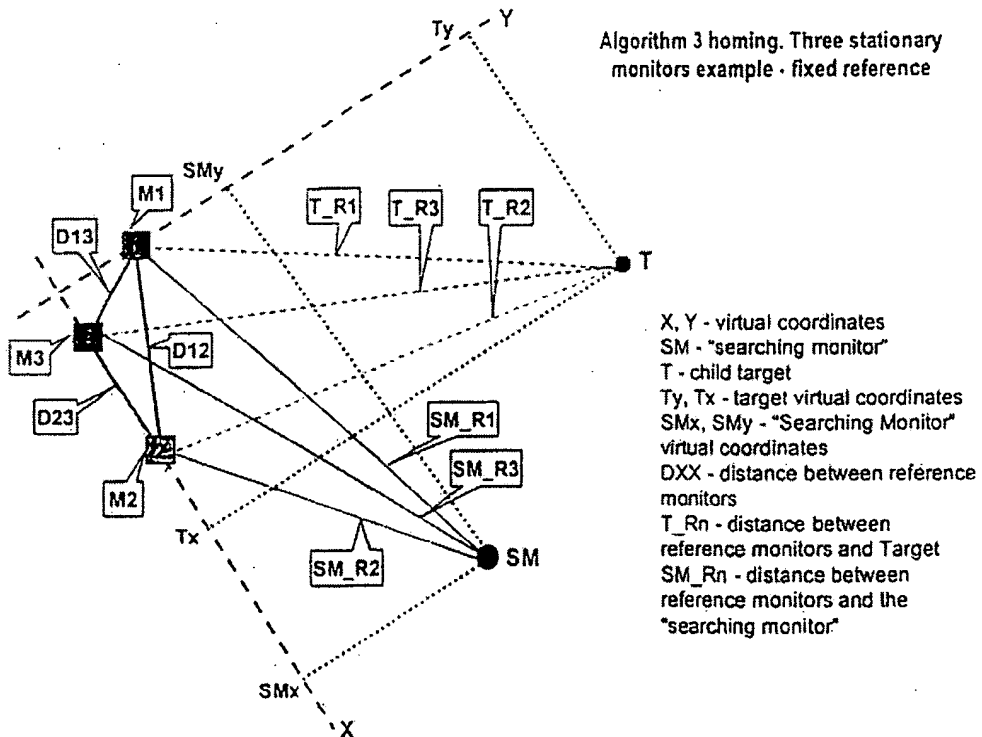


FIG. 16

Algorithm 3 homing. Three stationary monitors reference example, continued
(virtual coordinates are rotated for mapping into display grid)

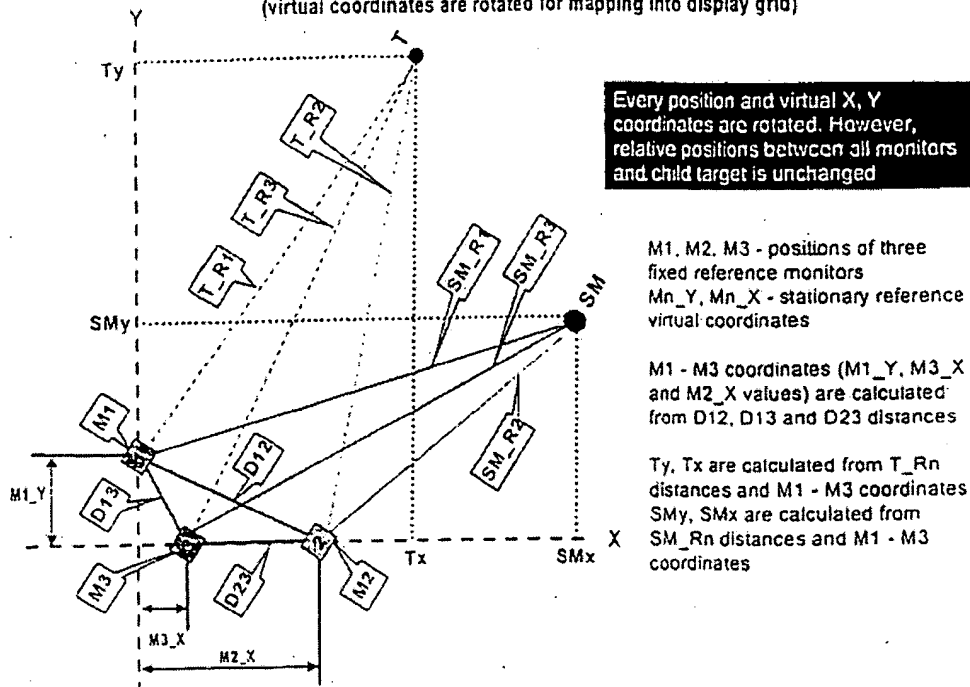


FIG. 17

Algorithm 3 homing. Three stationary monitors reference example, continued
(display grid)

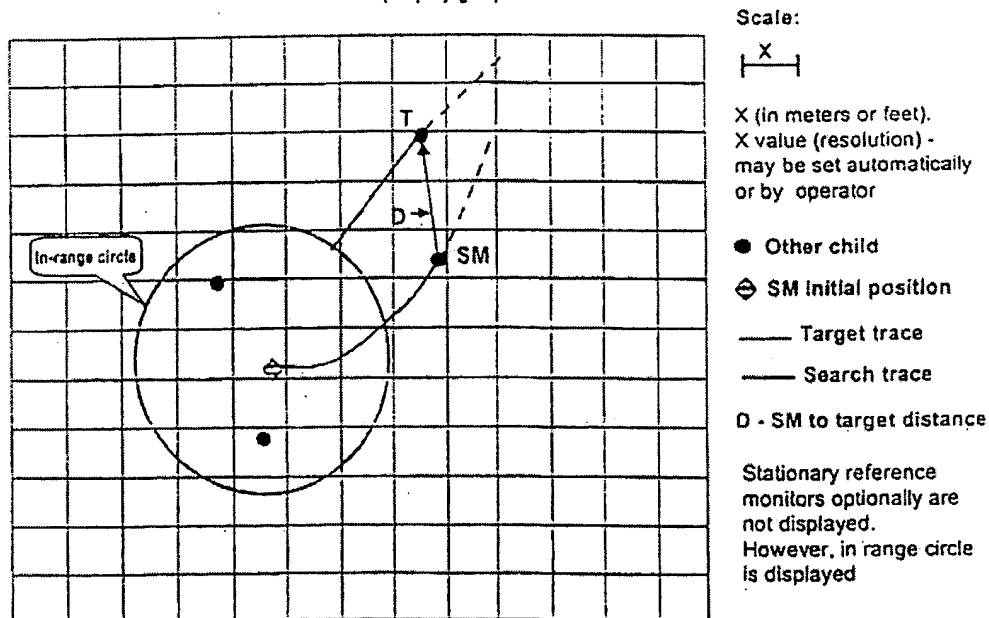


FIG. 18

Algorithm 3 homing. Three moving monitors reference example,
(display grid)

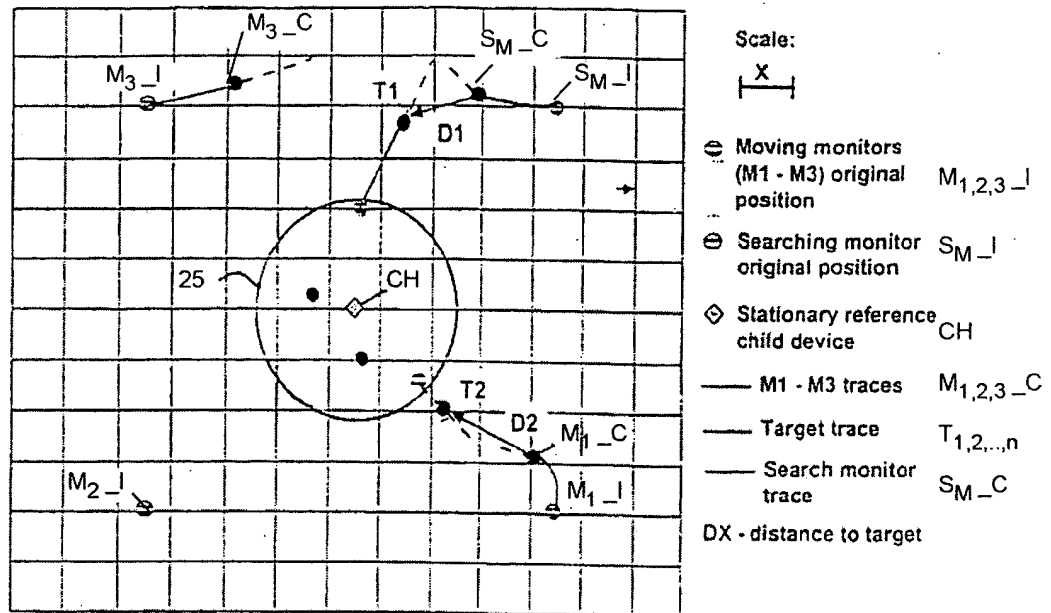
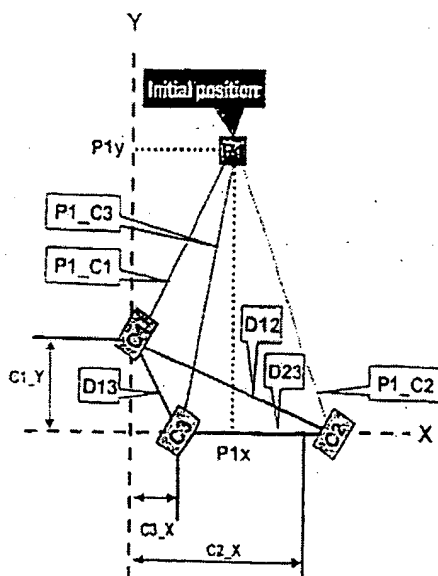


FIG. 19

Algorithm 2 homing. Three stationary child devices reference example
(virtual coordinates are rotated)



Every position and virtual X, Y coordinates are rotated. However, relative positions between all reference child devices searching monitor and target is unchanged

X, Y - virtual coordinates.
C1, C2, C3 - positions of three stationary child reference monitors

Ck_Y, Ck_X - fixed child reference virtual coordinates are calculated from D12, D13 and D23 values

Pny, Pnx are calculated from Pn_Ck distances and C1-C3 coordinates

FIG. 20

Algorithm 2 homing. Three stationary child devices reference example, continued

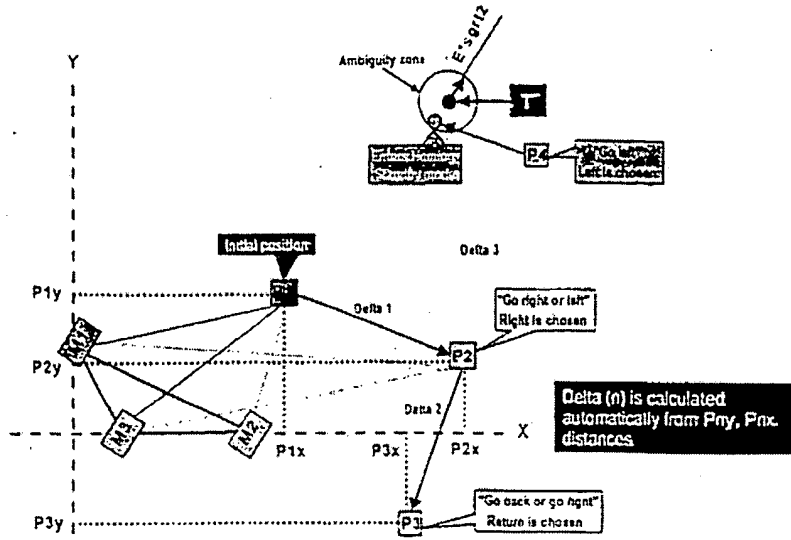


FIG. 21

**Algorithm 2 homing. Three stationary child devices reference example, continued
(obstacle avoidance/bypassing)**

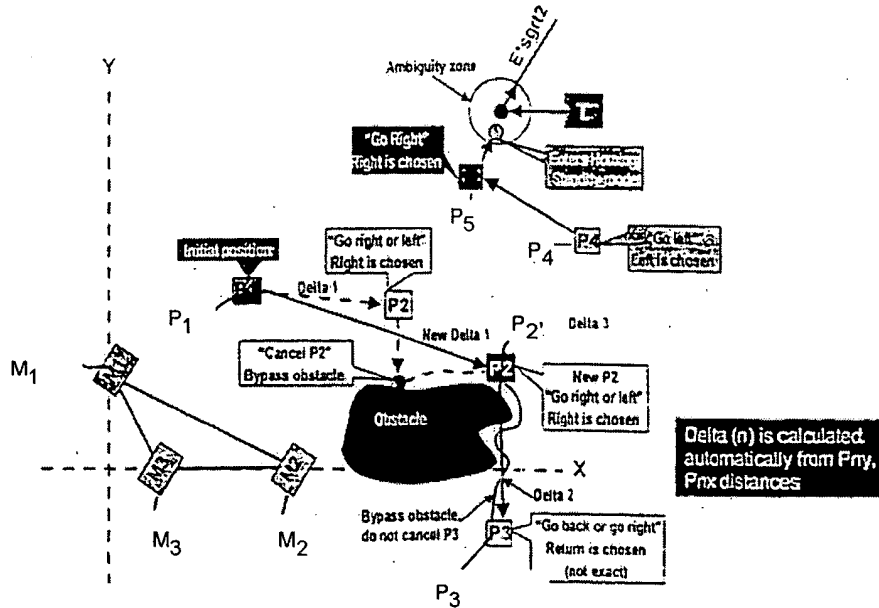


FIG. 22

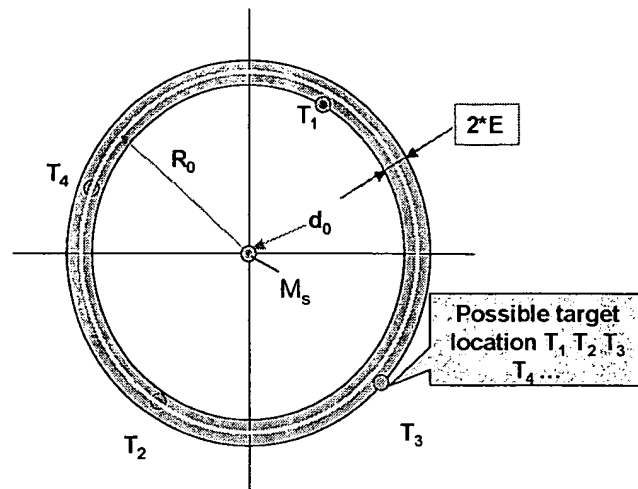


FIG. 23

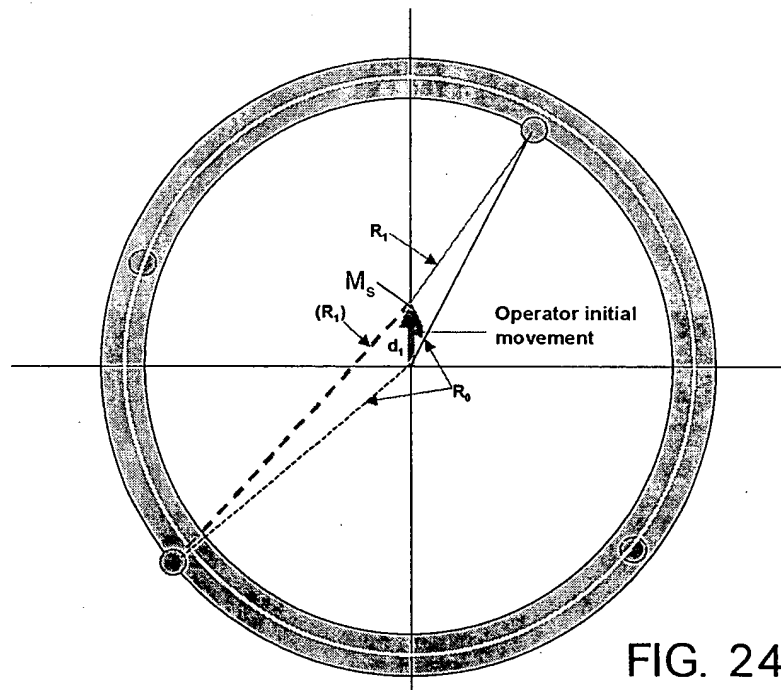


FIG. 24

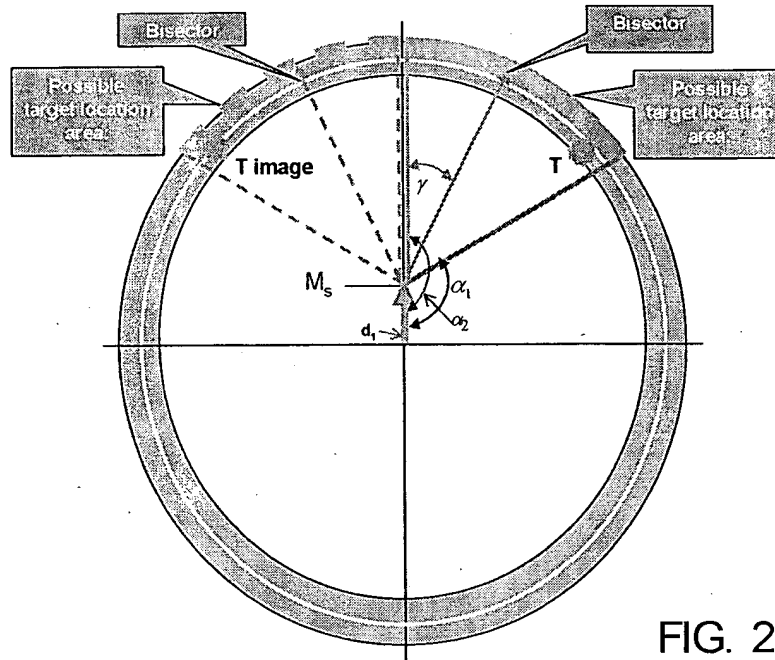


FIG. 25

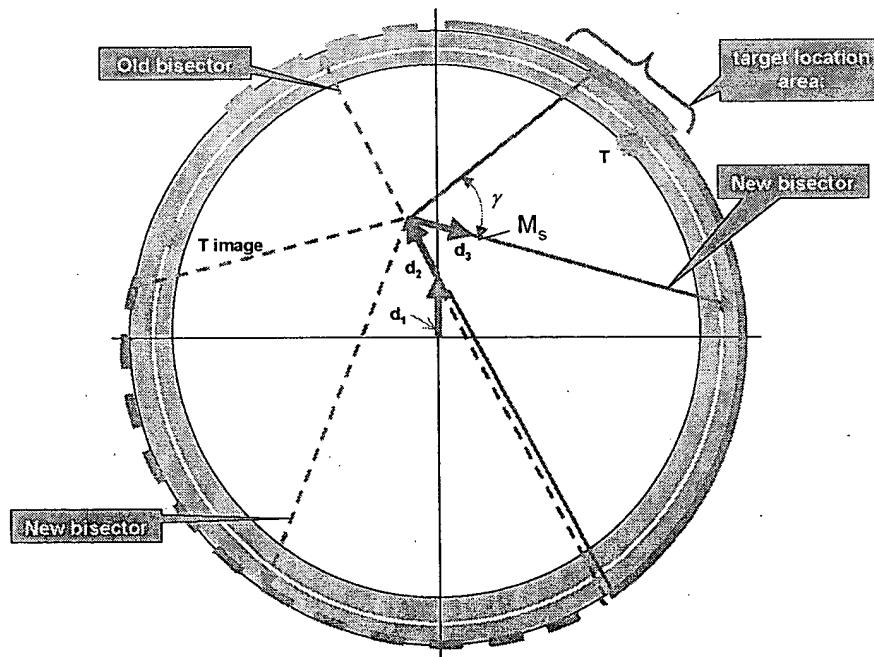


FIG. 26

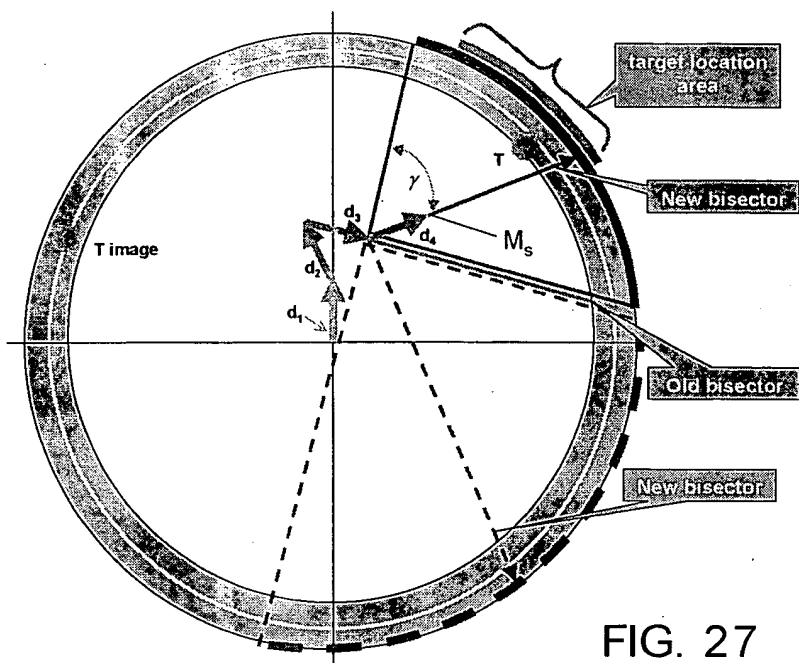


FIG. 27

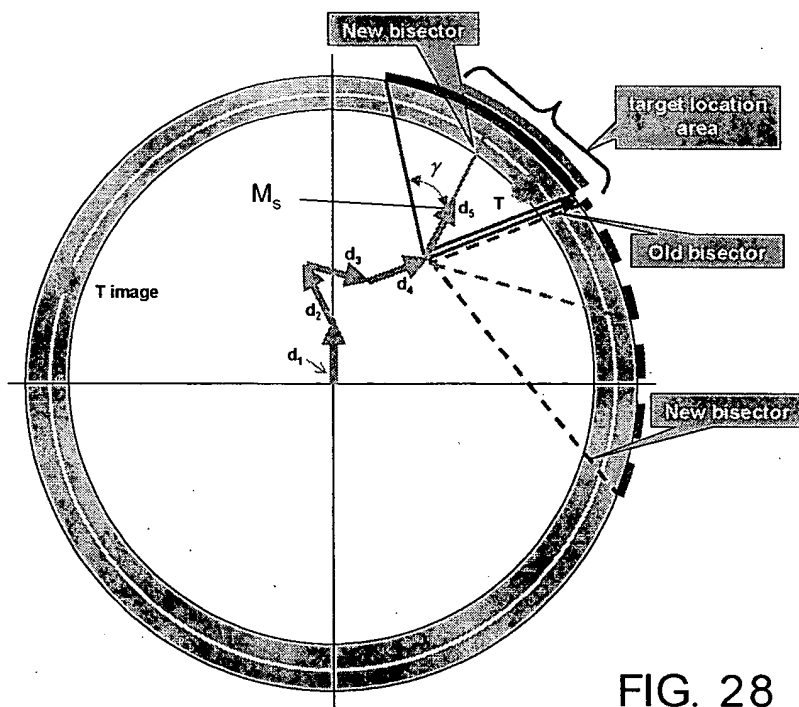


FIG. 28

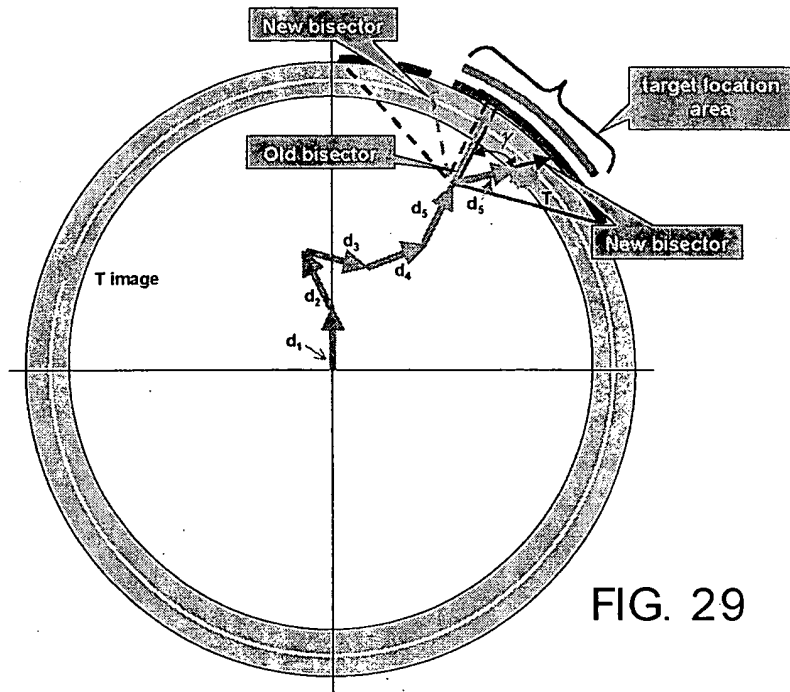


FIG. 29

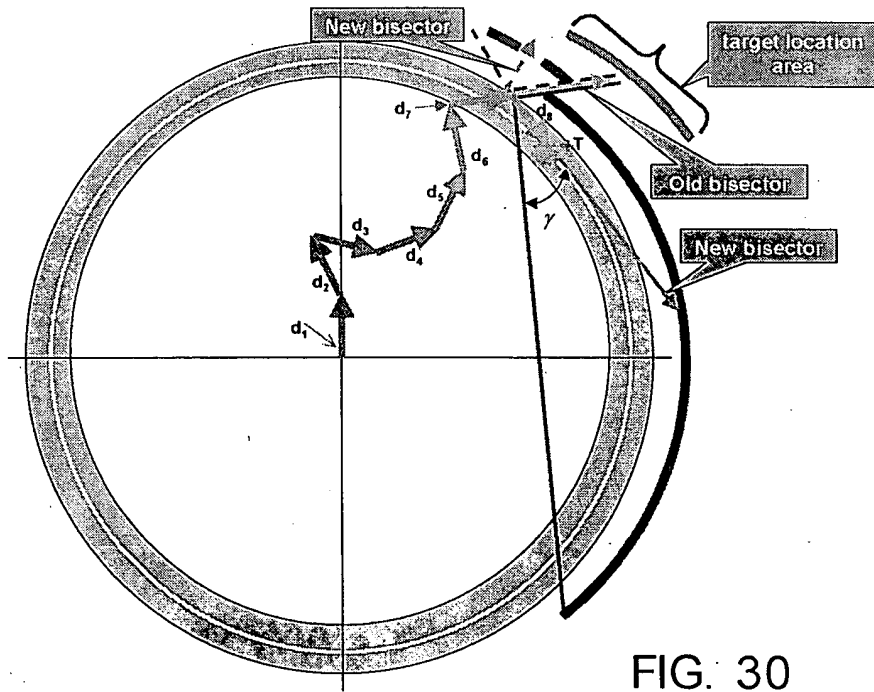


FIG. 30

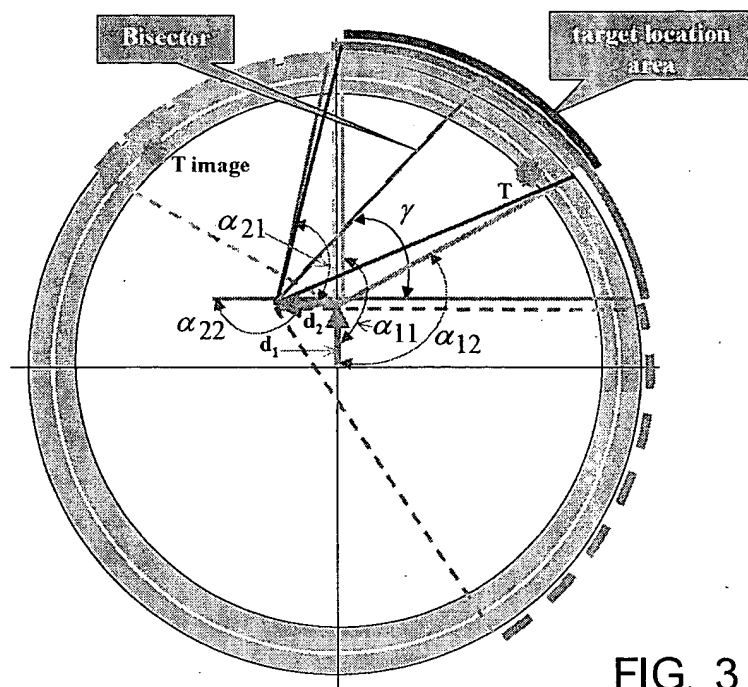


FIG. 31

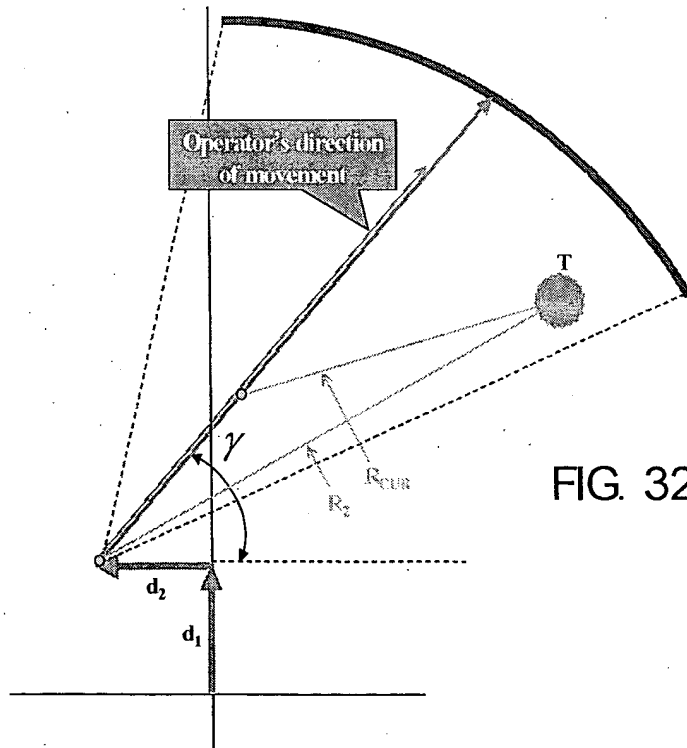


FIG. 32

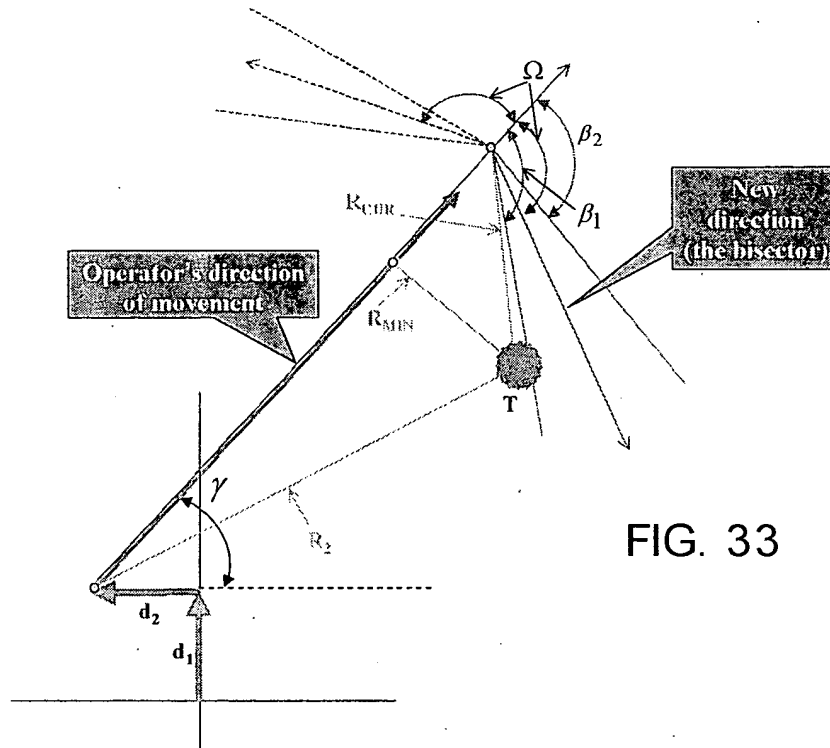


FIG. 33

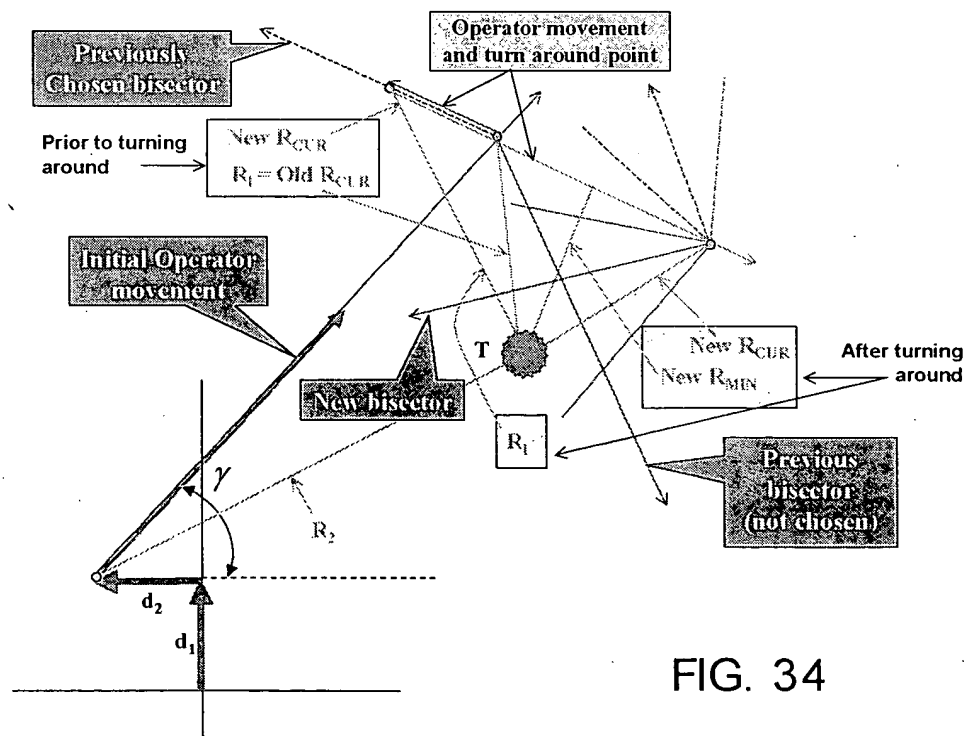


FIG. 34

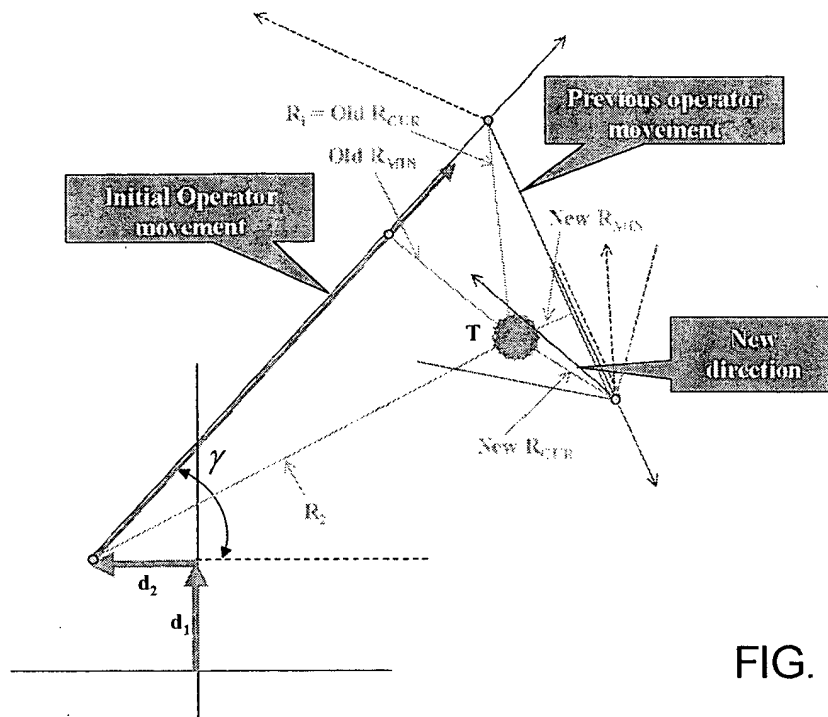


FIG. 35

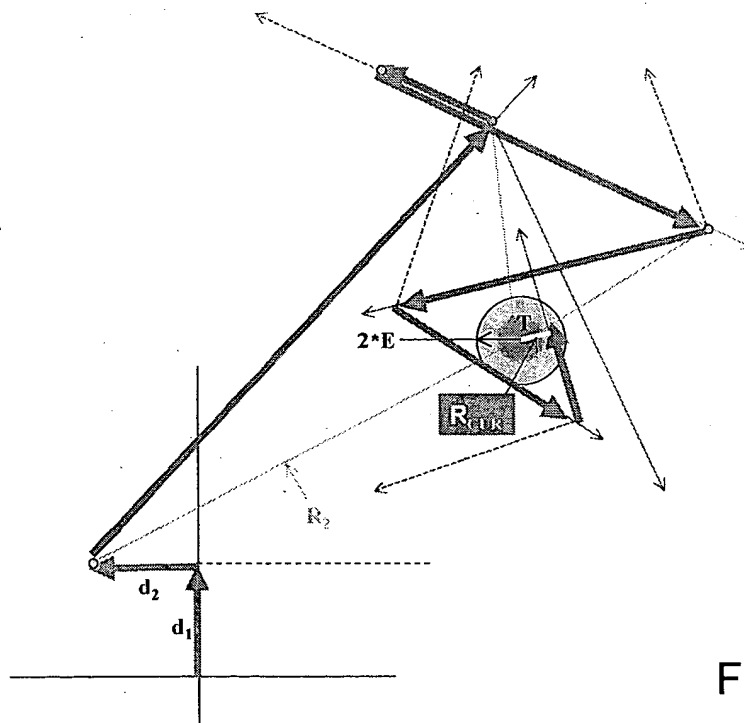


FIG. 36

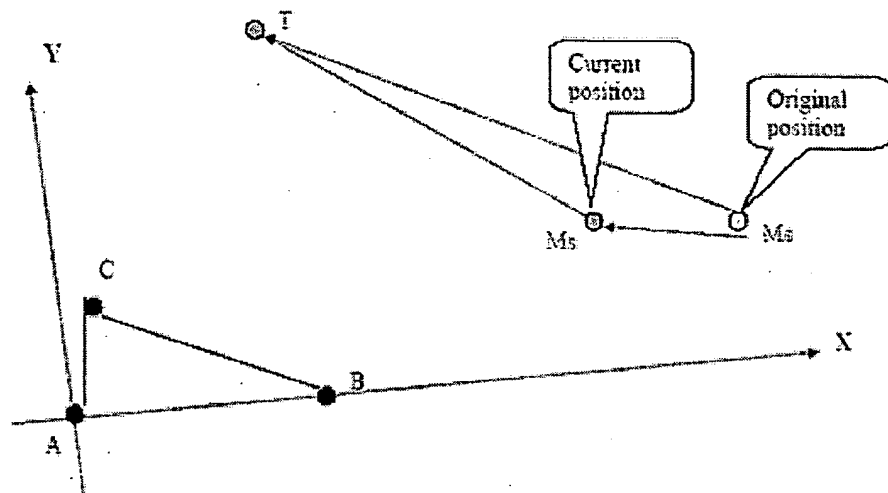


FIG. 38A

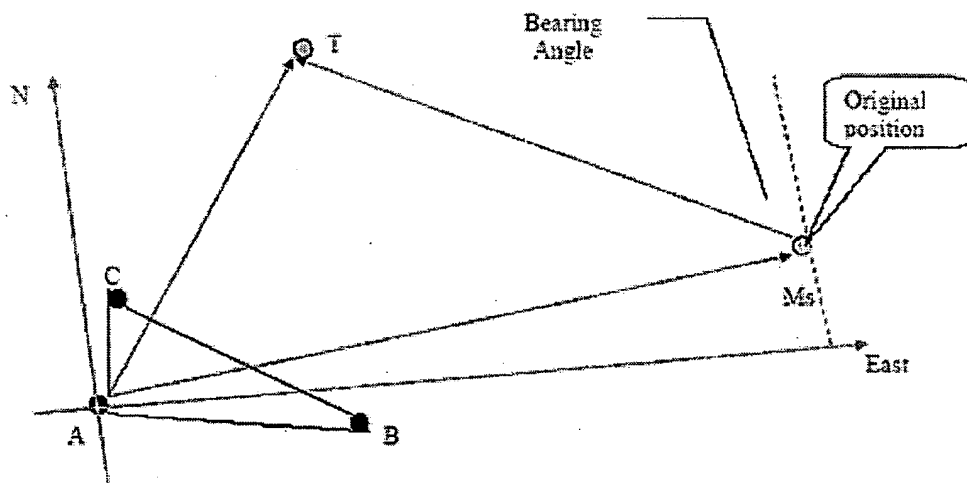


FIG. 38B

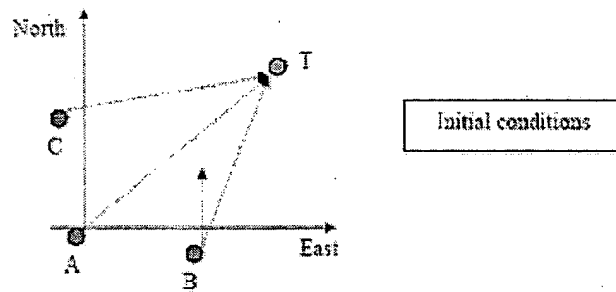


FIG. 39A

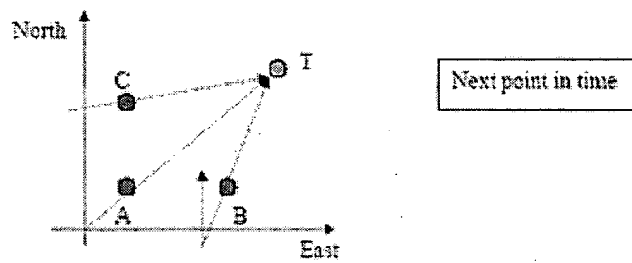


FIG. 39B

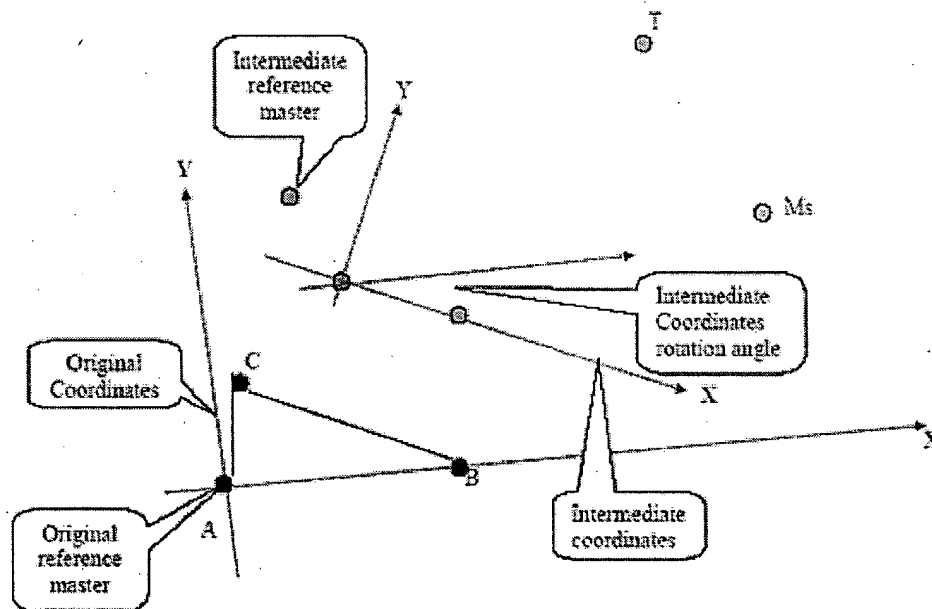
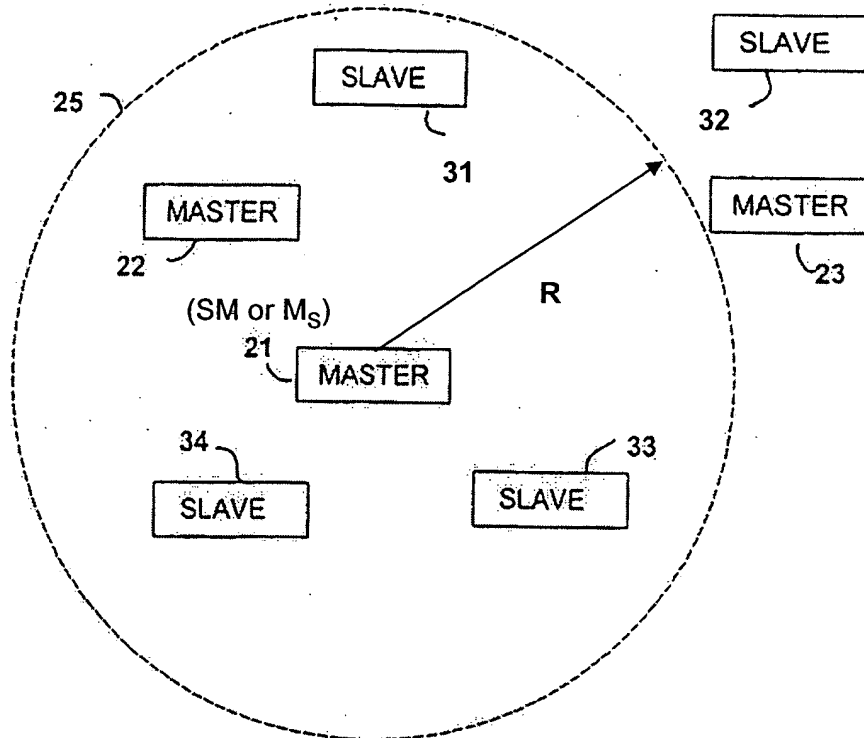


FIG. 40

FIG. 1



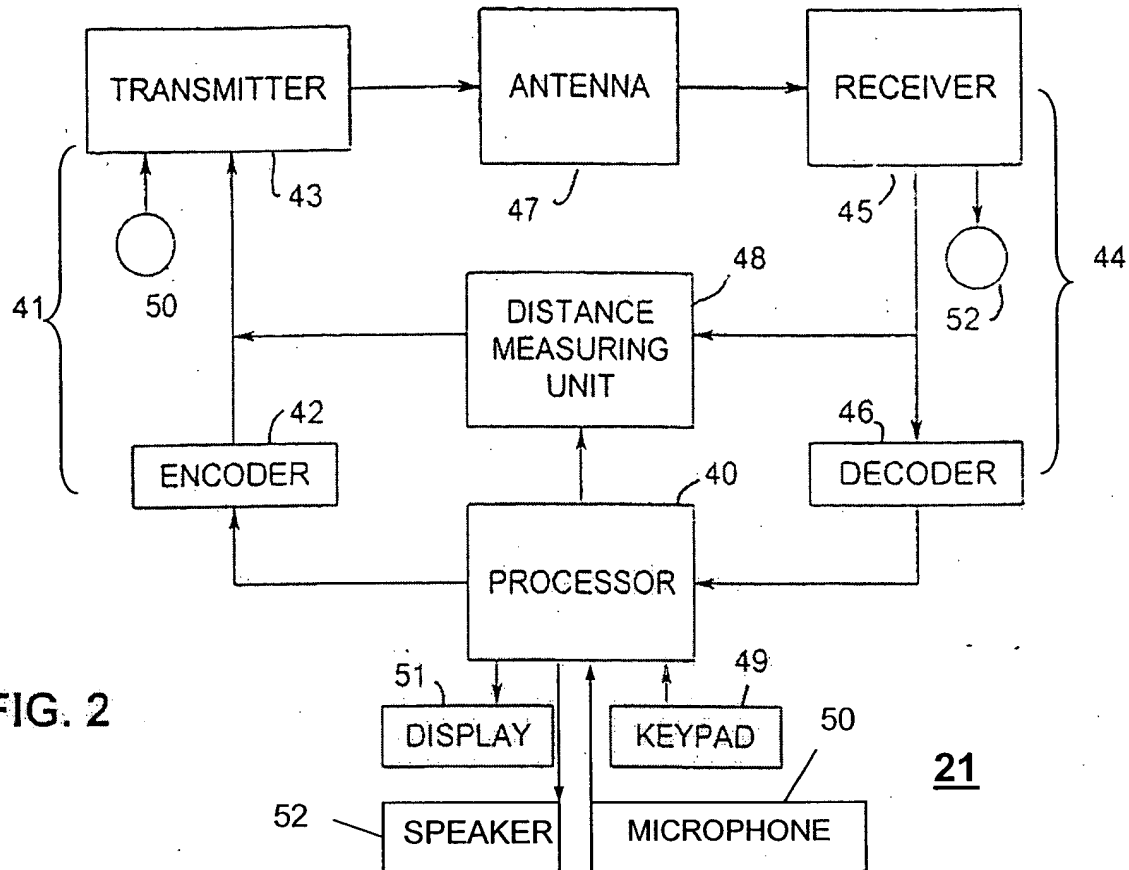


FIG. 2

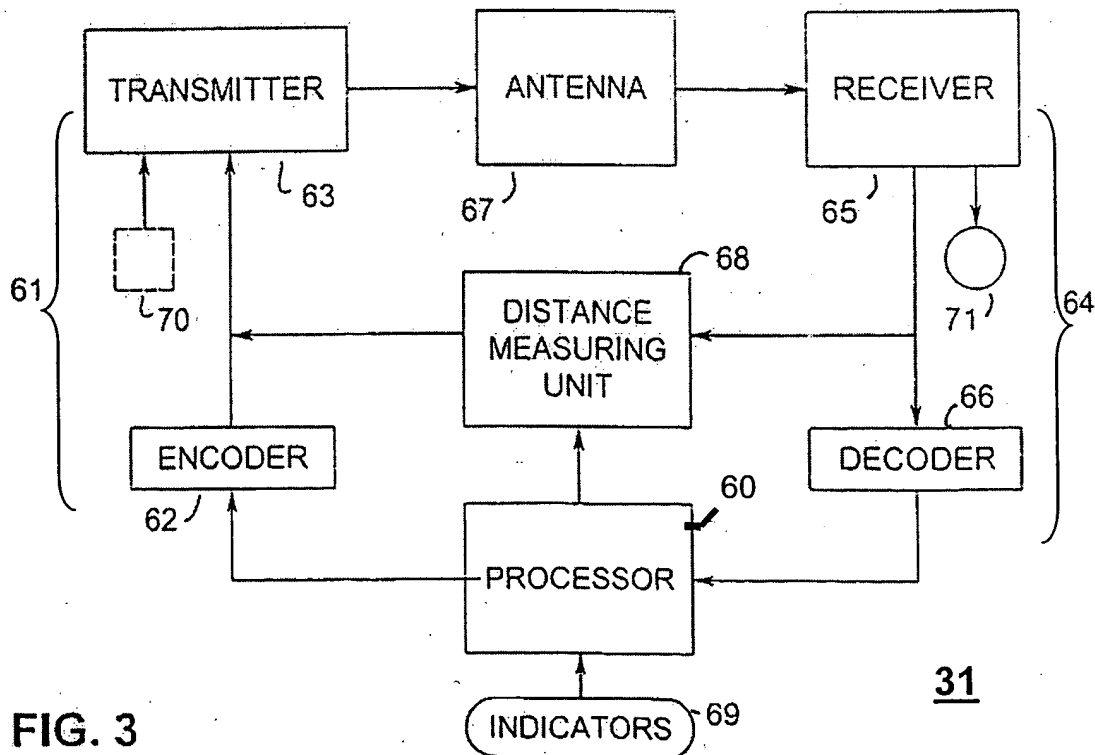


FIG. 3

FIG. 2A

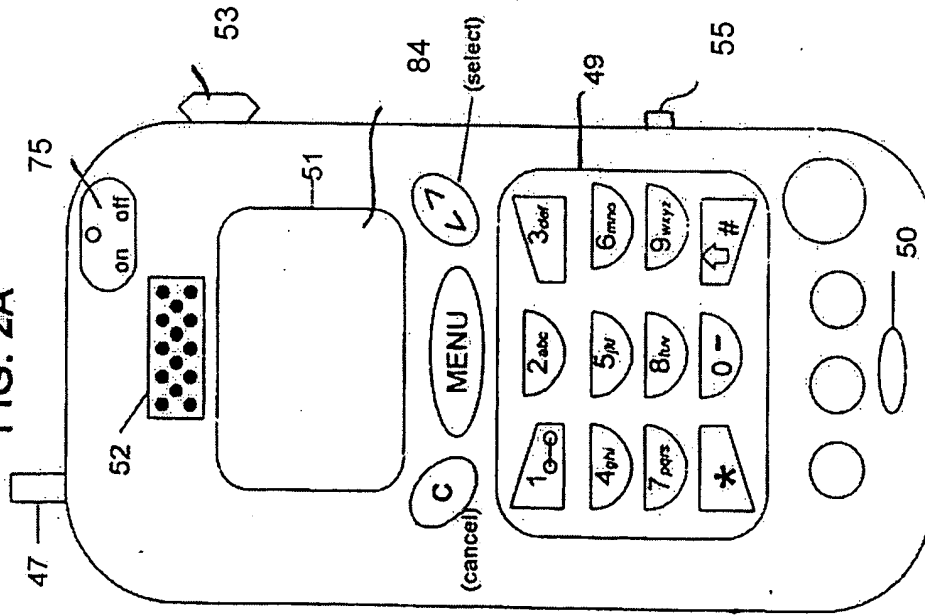
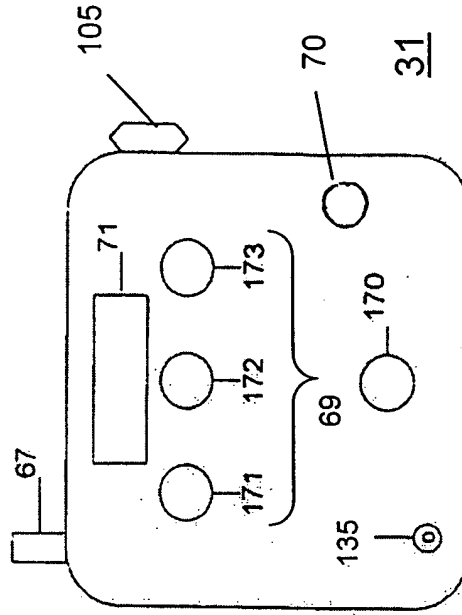


FIG. 3A



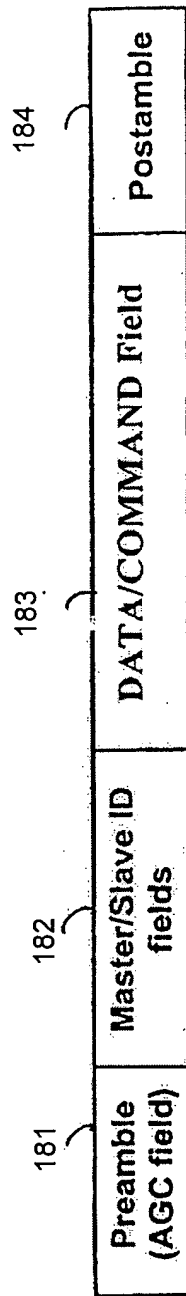


FIG. 3B

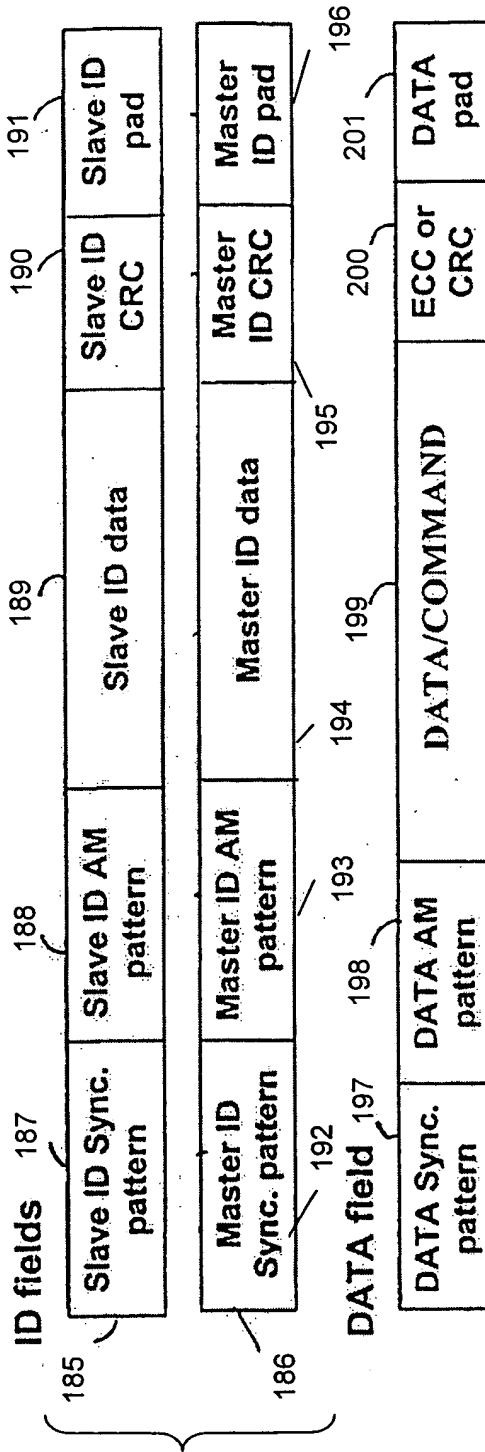


FIG. 3C



FIG. 3D

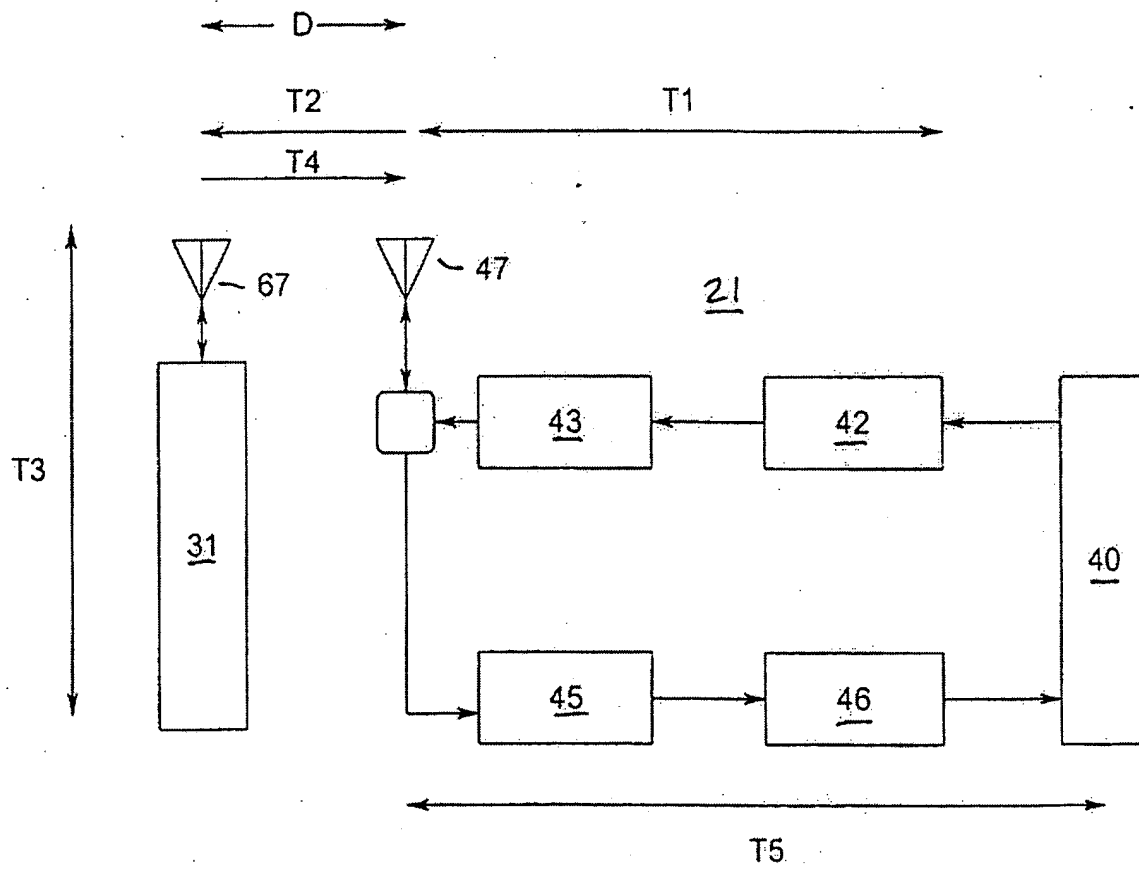


FIG. 4

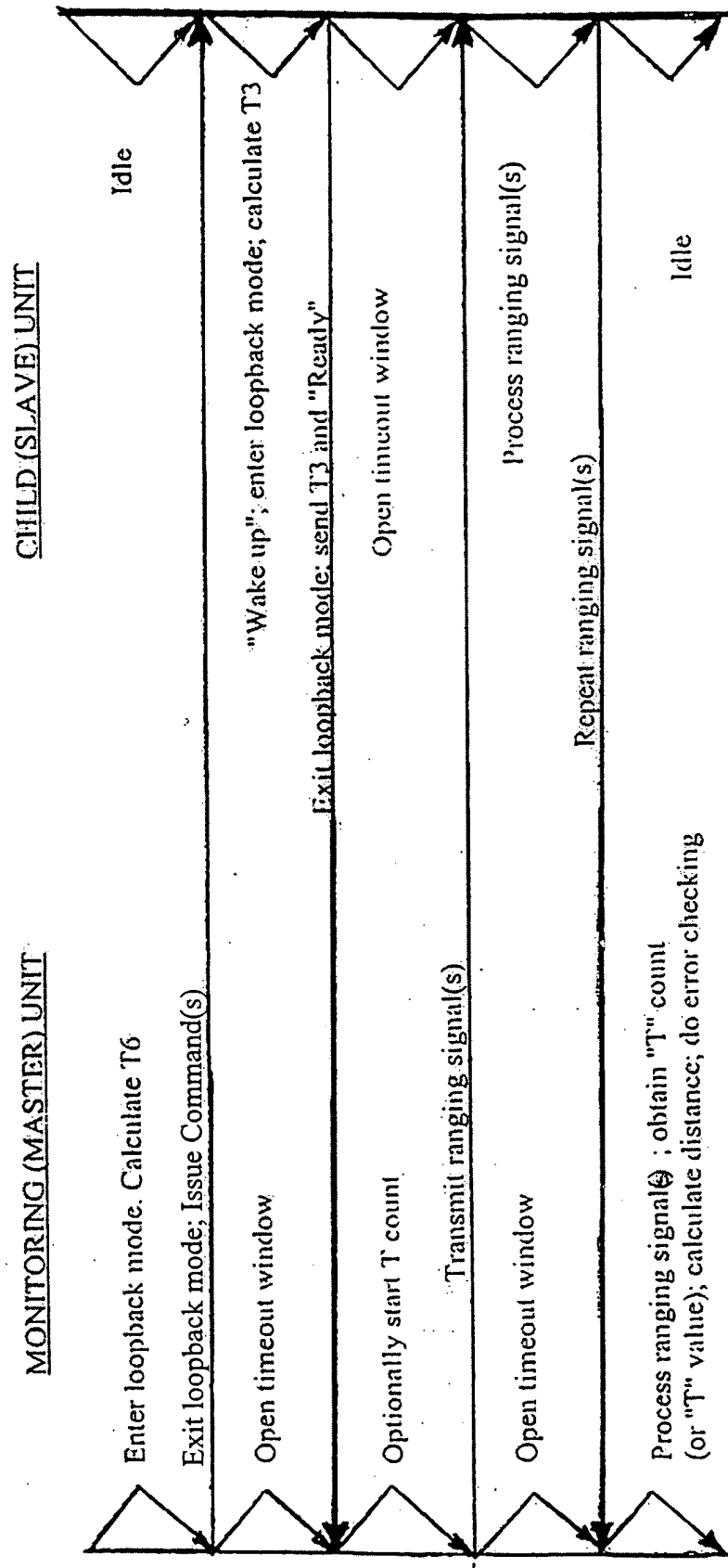
FIG. 4ADISTANCE/TIME MEASUREMENT SEQUENCE - OPTION 1

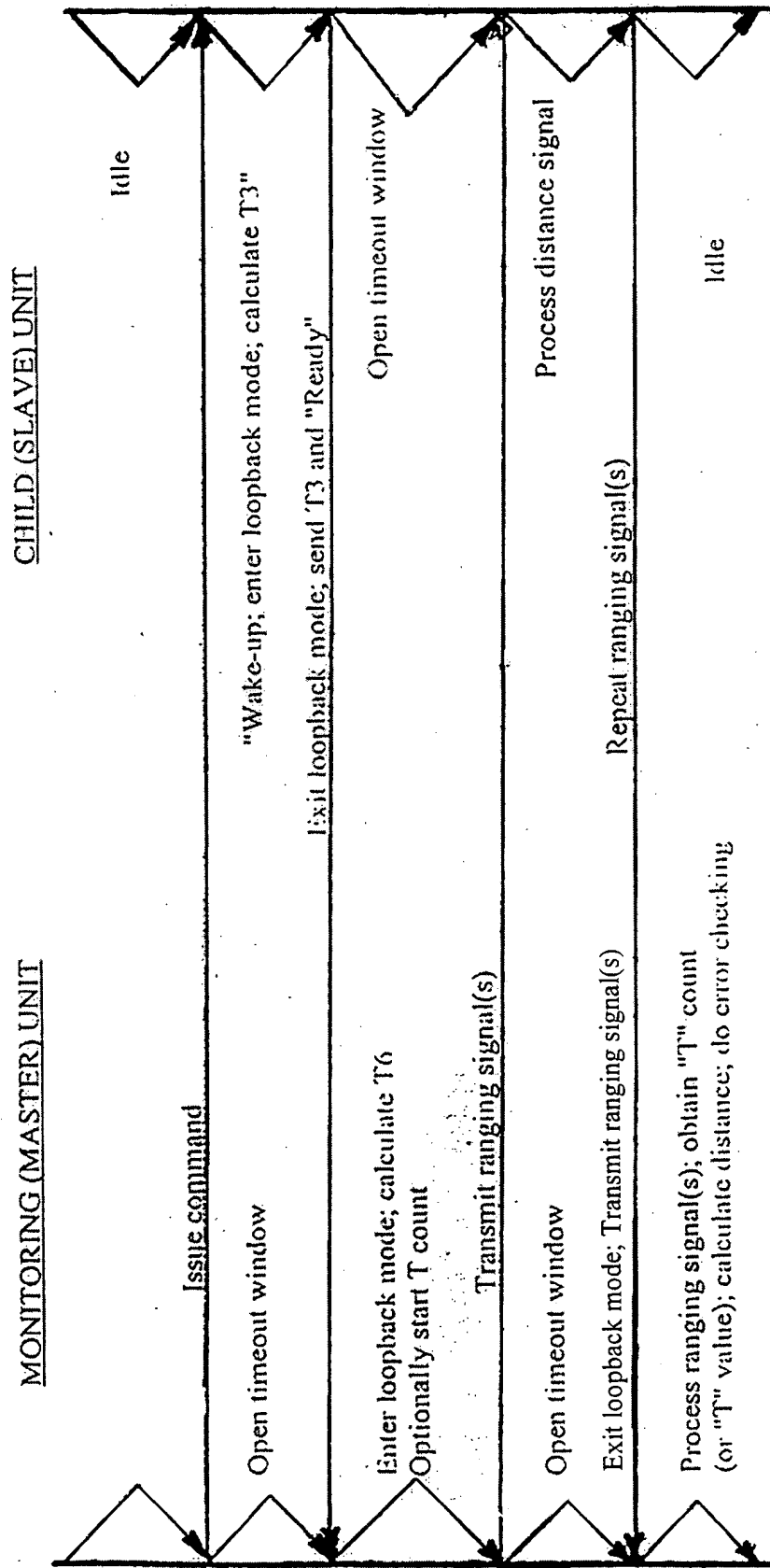
FIG. 4B**DISTANCE/TIME MEASUREMENT SEQUENCE - OPTION 2**

FIG. 5

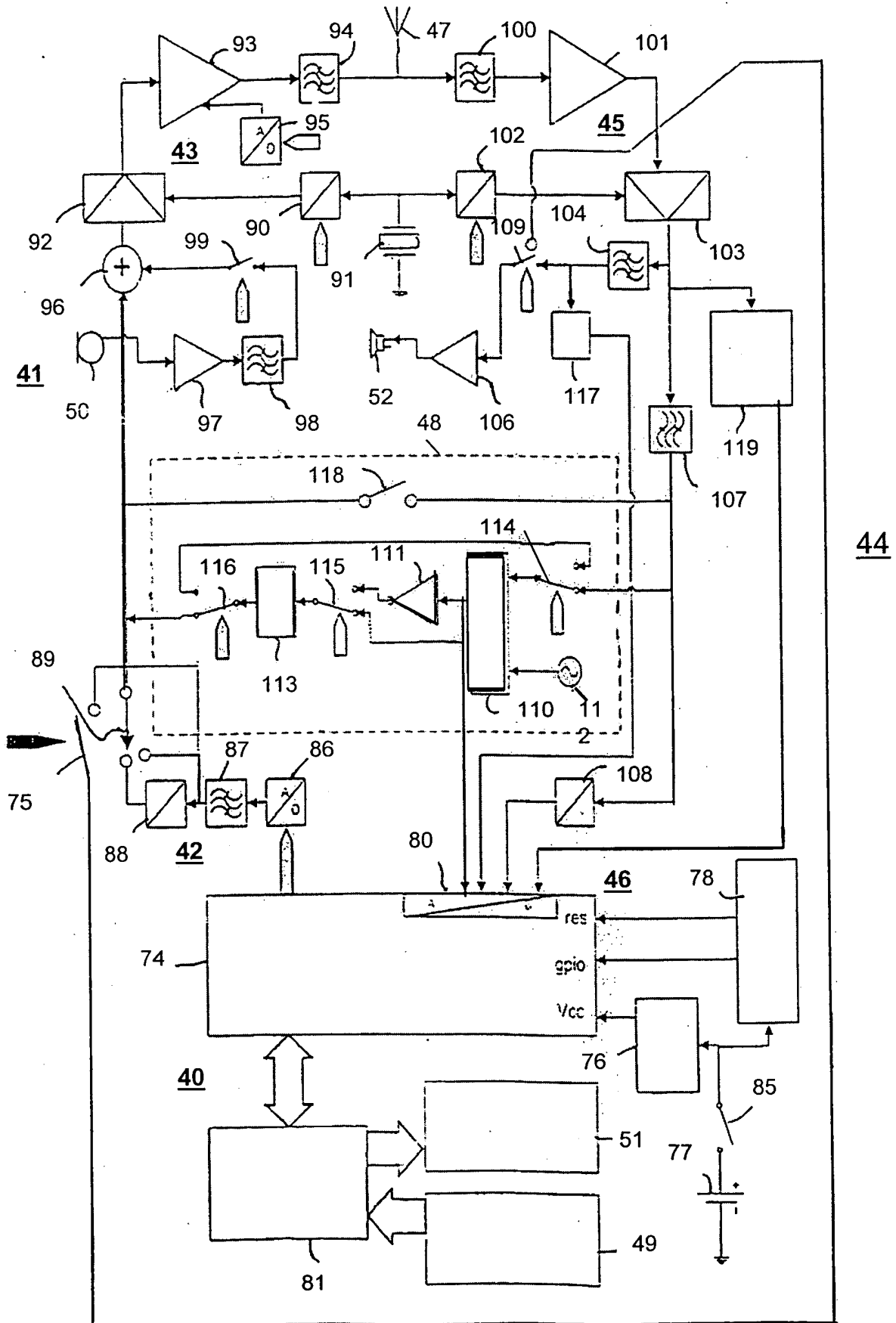
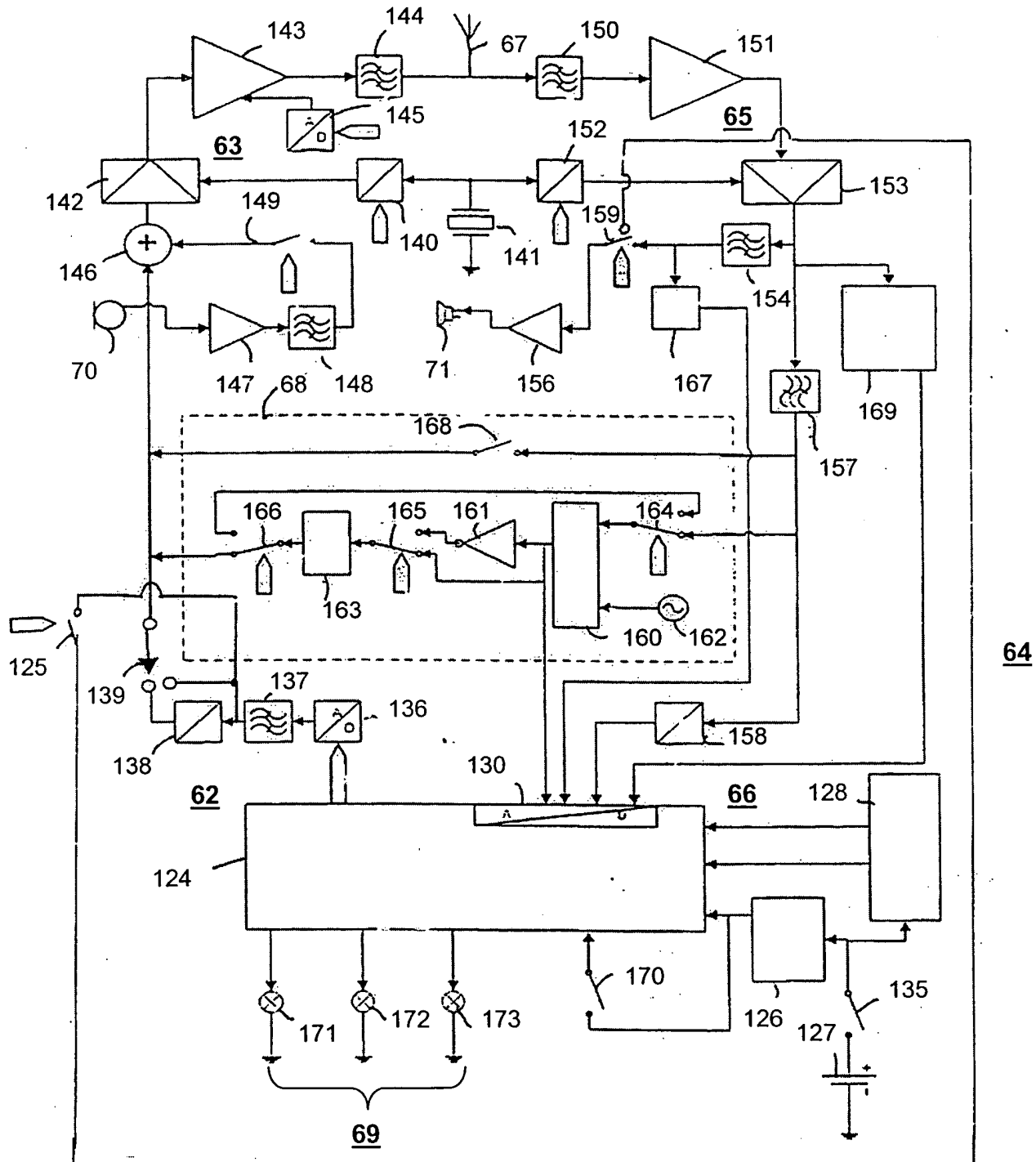


FIG. 6A



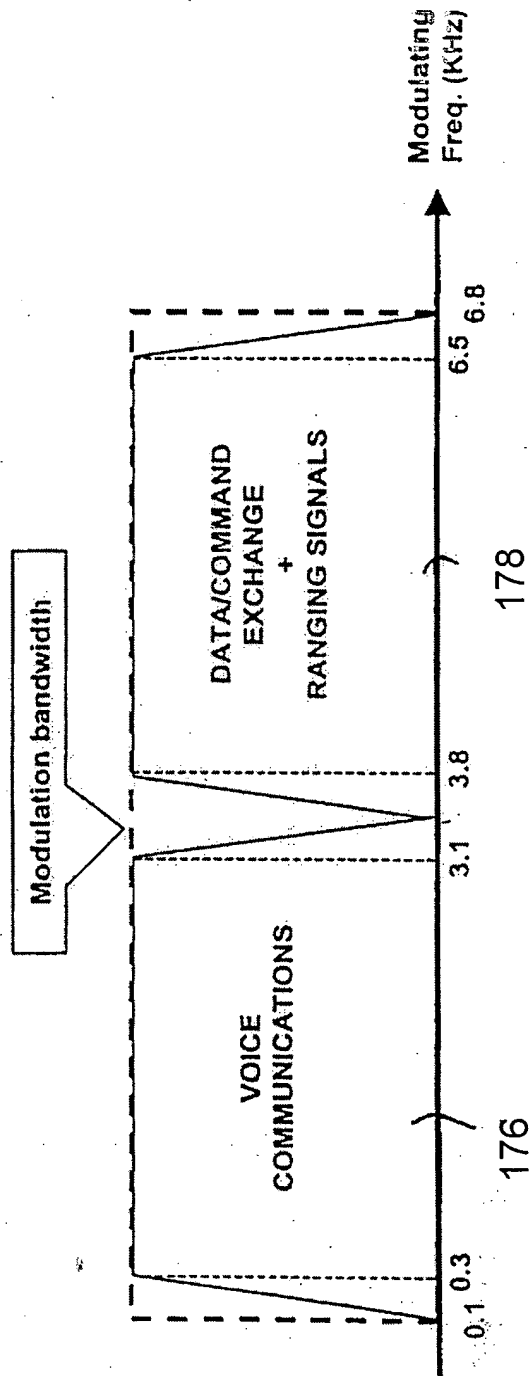


FIG. 6B

Position Determination Example

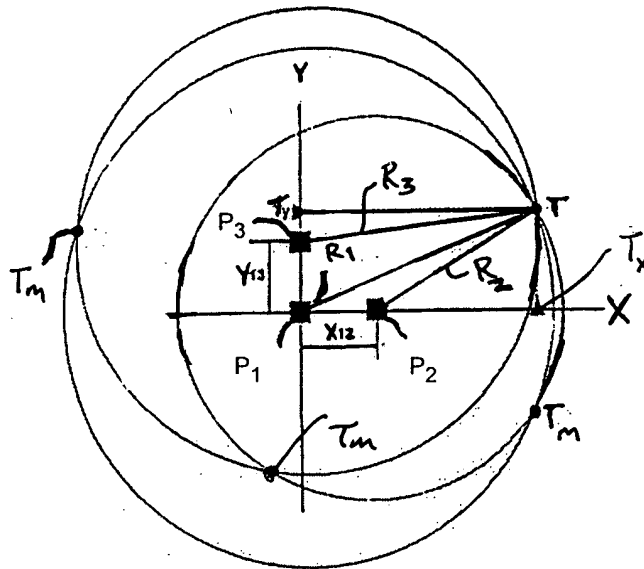


FIG. 7

Position Determination Ambiguity

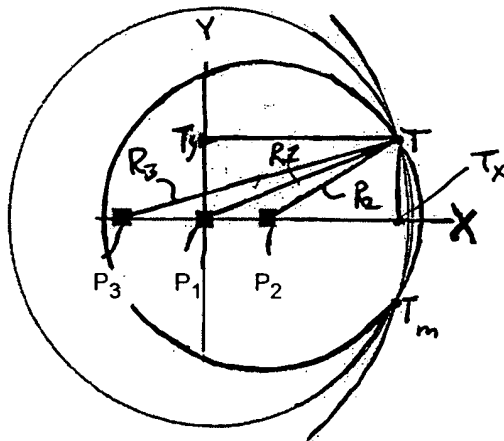


FIG. 8

Position ambiguity and distance measurement error

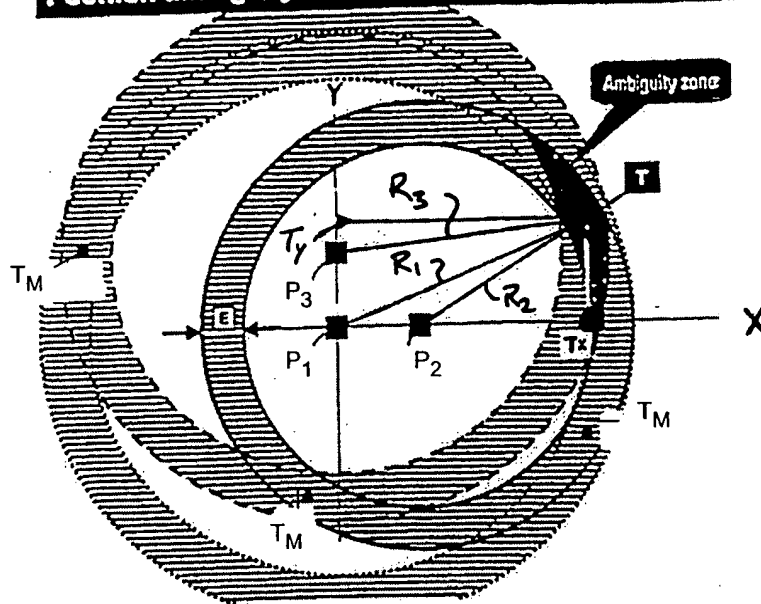


FIG. 9

Ambiguity reduction, example 1

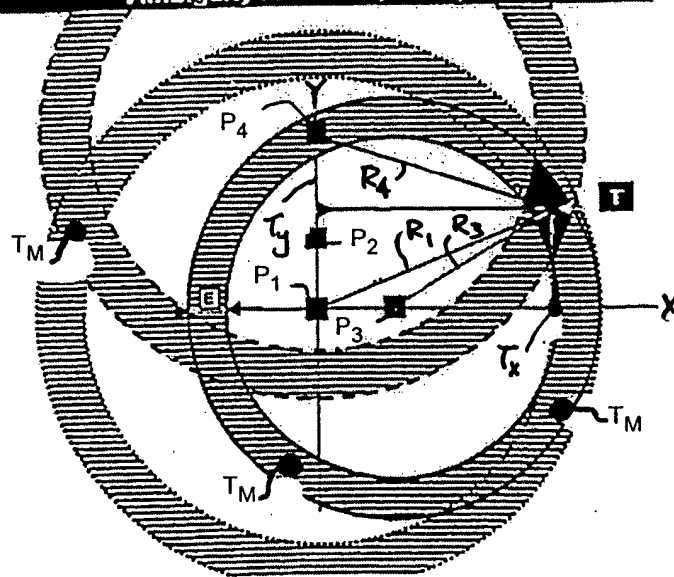


FIG. 10

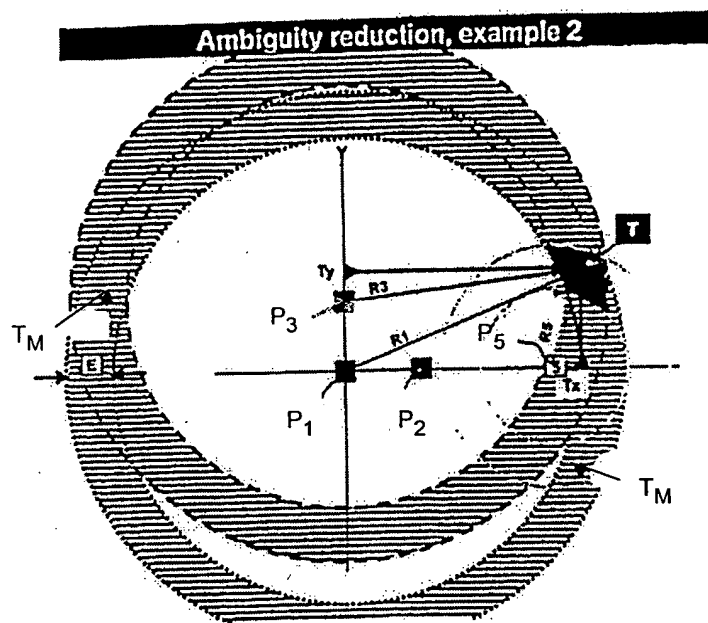
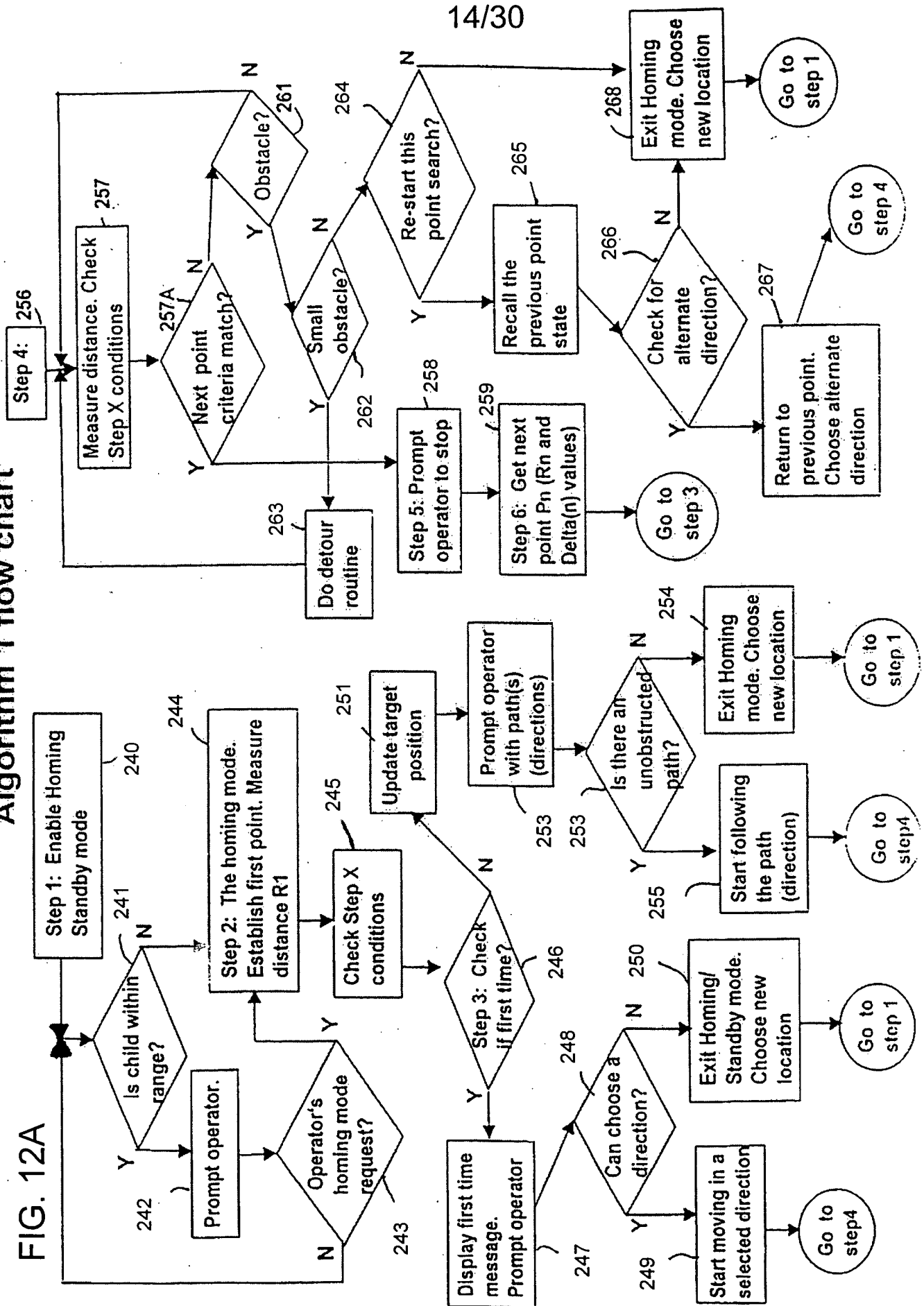


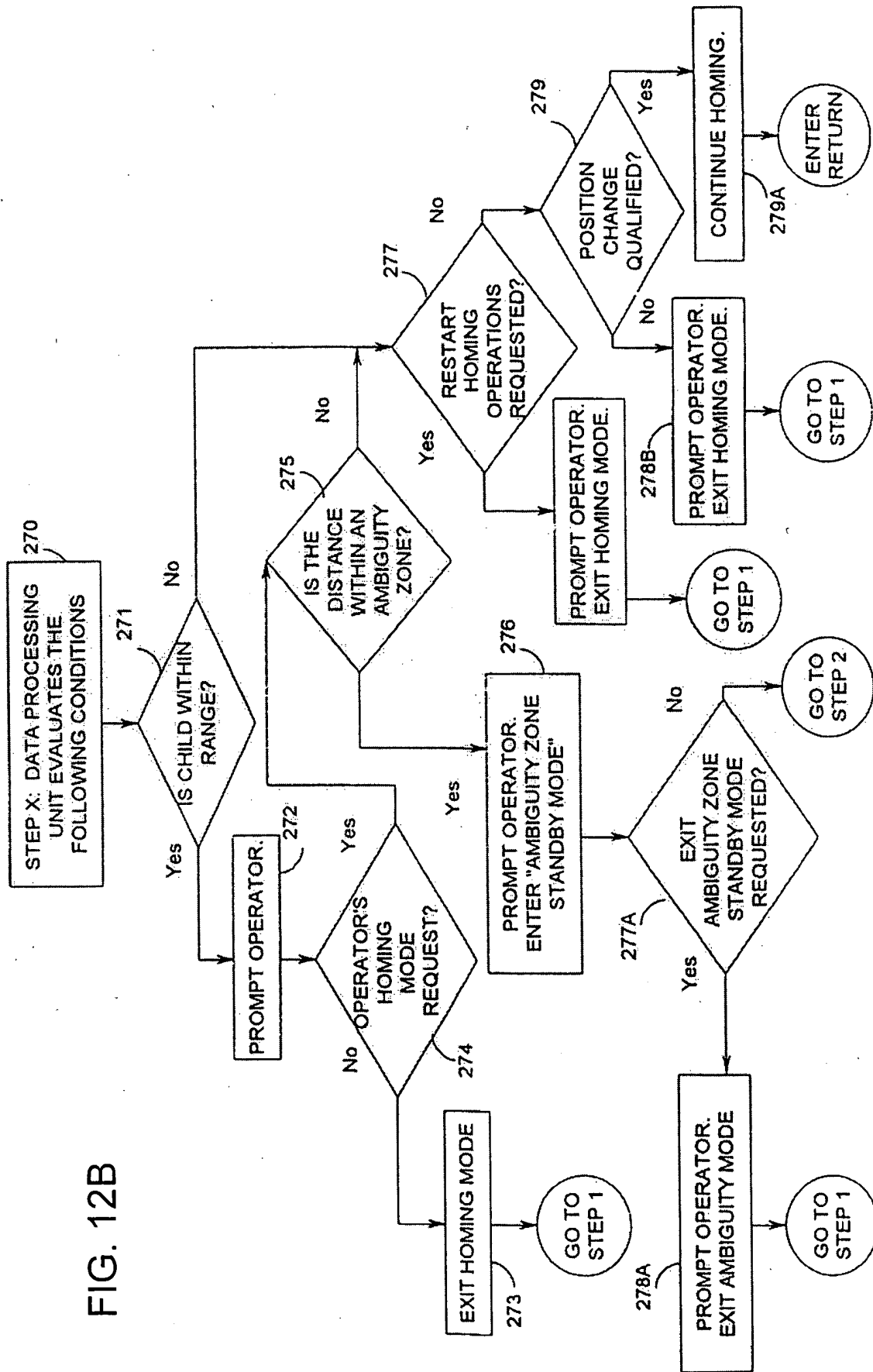
FIG. 11

Algorithm 1 flow chart

FIG. 12A



ALGORITHM 1 FLOW CHART, CONTINUED



Algorithm 2 flow chart

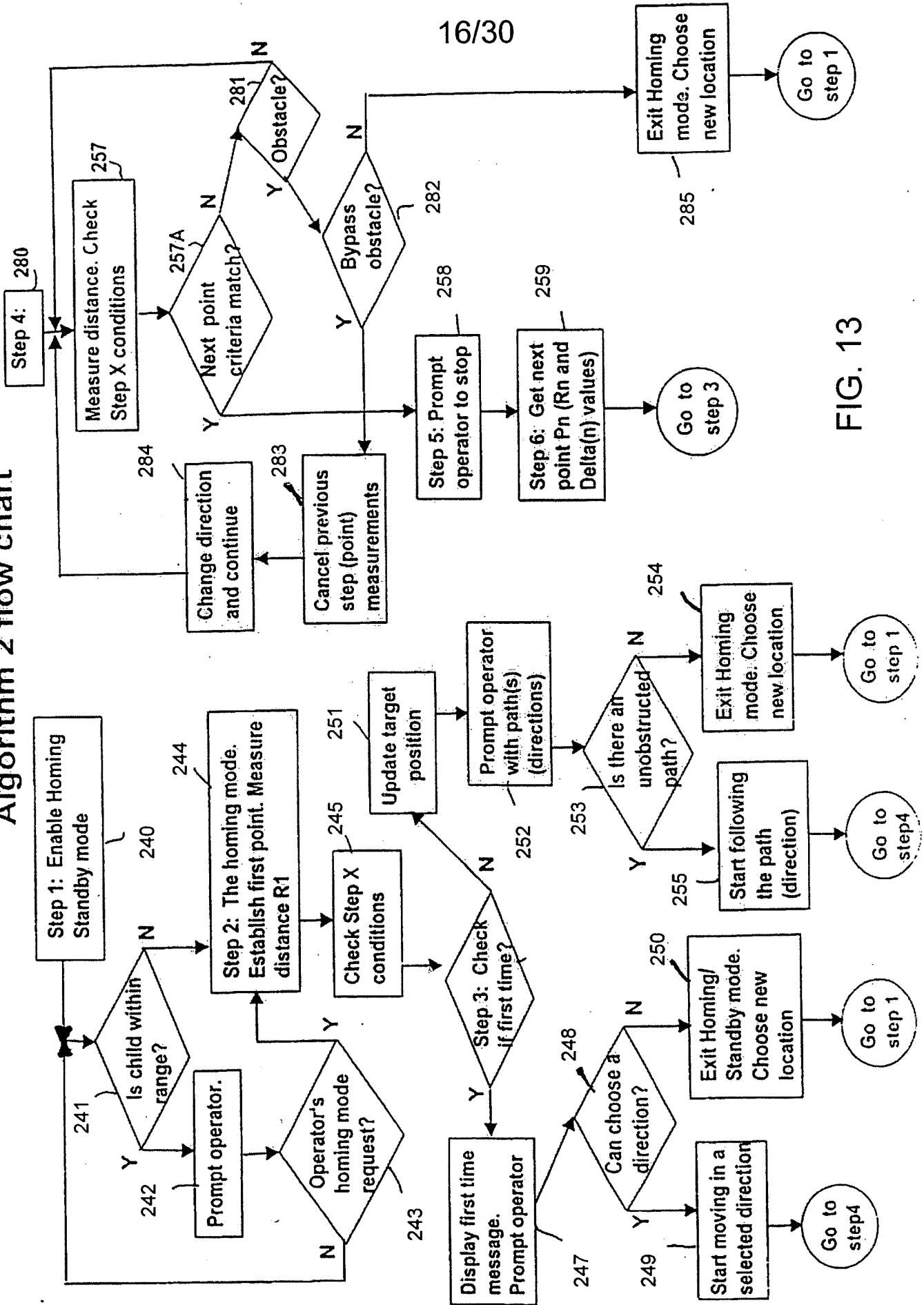
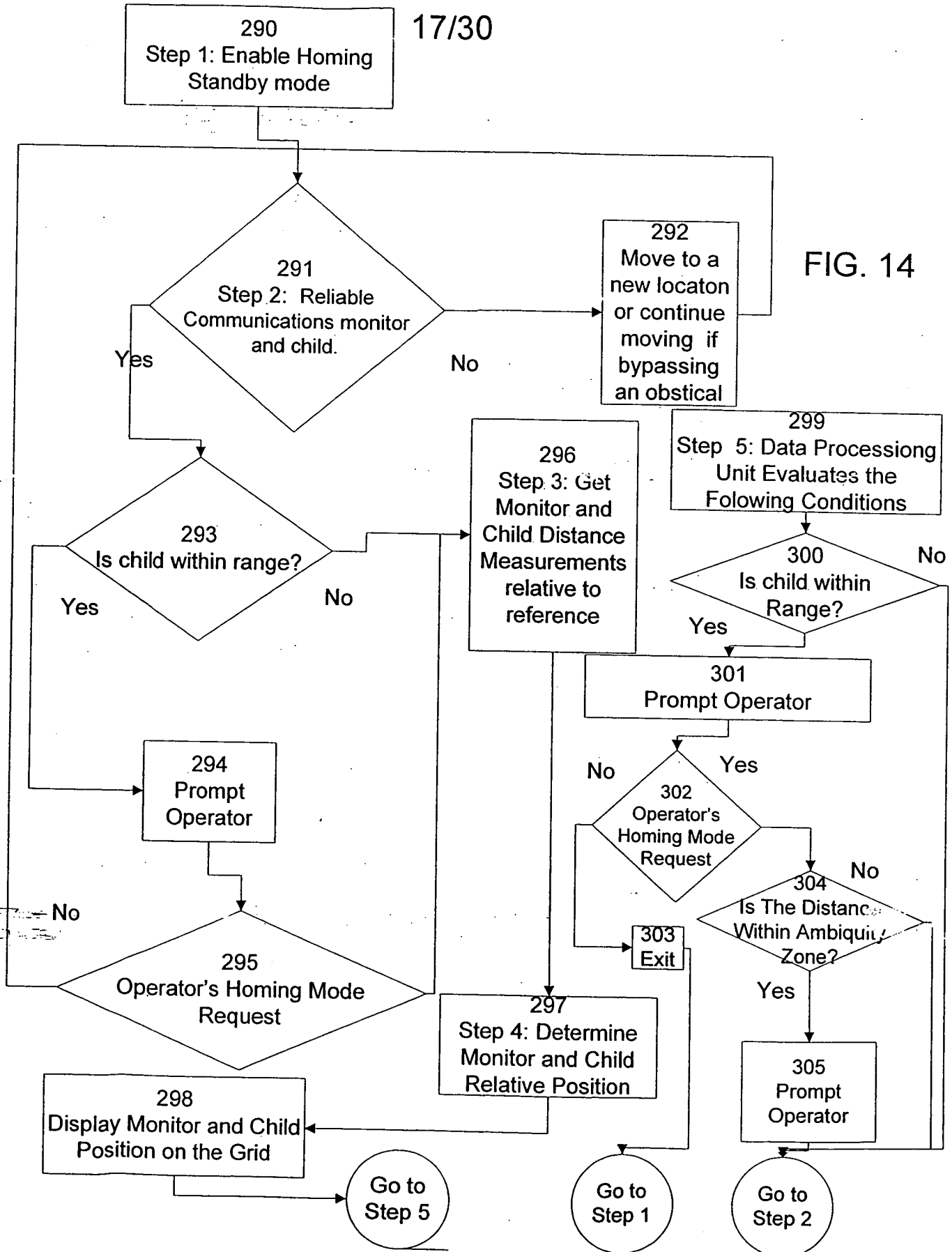


FIG. 13

FIG. 14



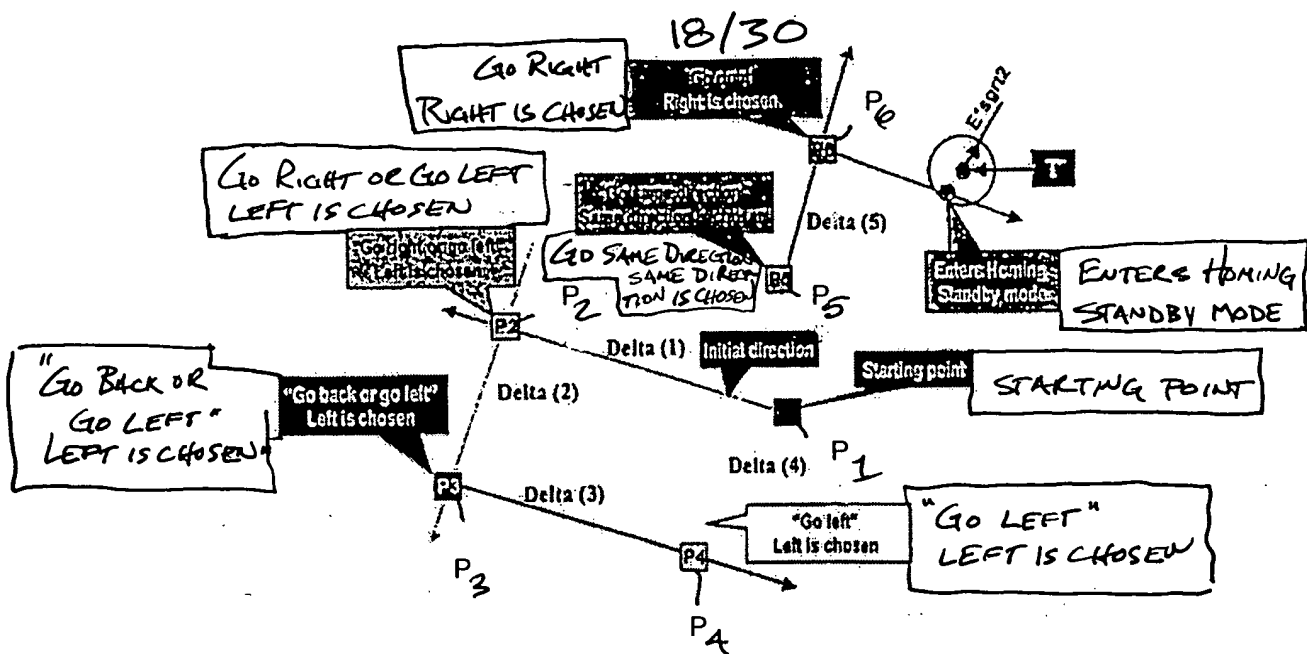
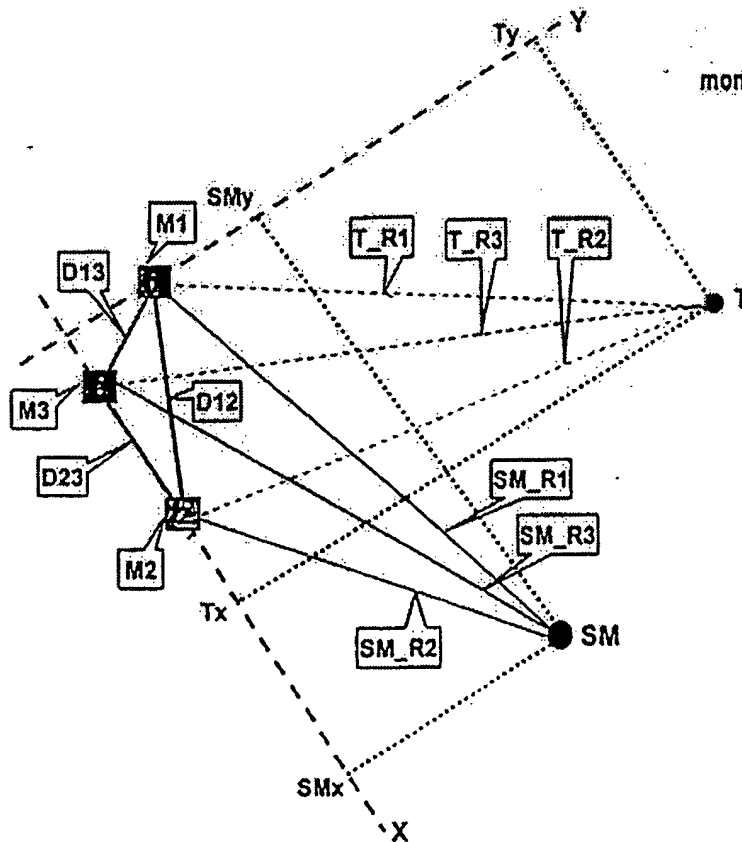


FIG. 15



Homing. Three stationary monitors example - fixed reference

X, Y - virtual coordinates
 SM - "searching monitor"
 T - child target
 Ty, Tx - target virtual coordinates
 SMx, SMy - "Searching Monitor" virtual coordinates
 DXX - distance between reference monitors
 T_Rn - distance between reference monitors and Target
 SM_Rn - distance between reference monitors and the "searching monitor"

FIG. 16

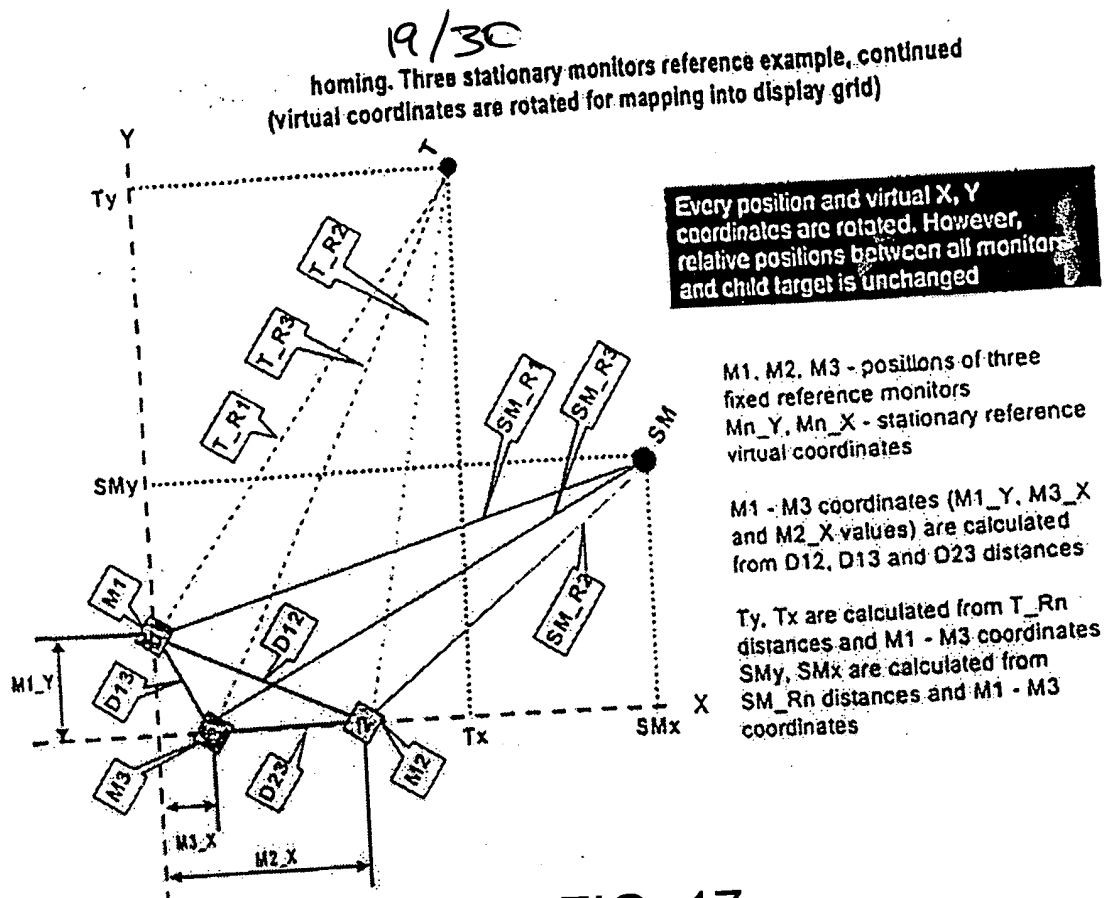


FIG. 17

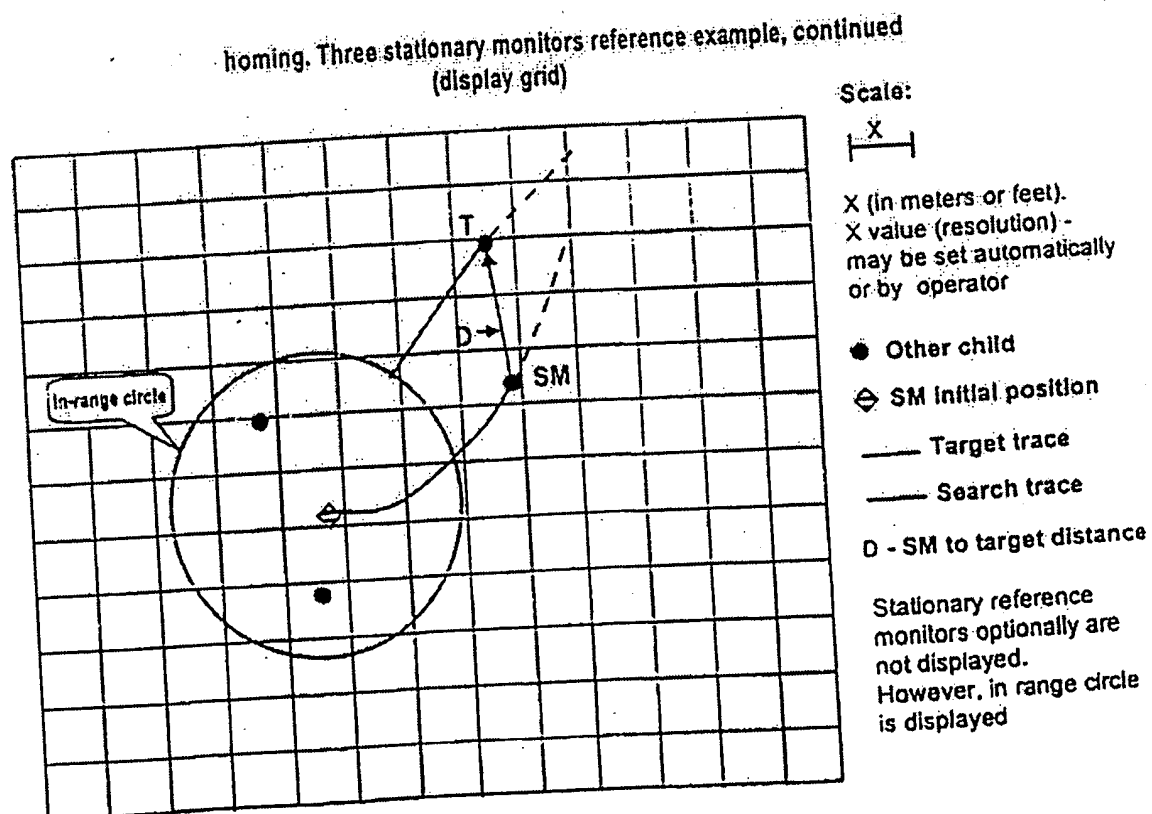


FIG. 18

2 homing. Three stationary child devices reference example, continued

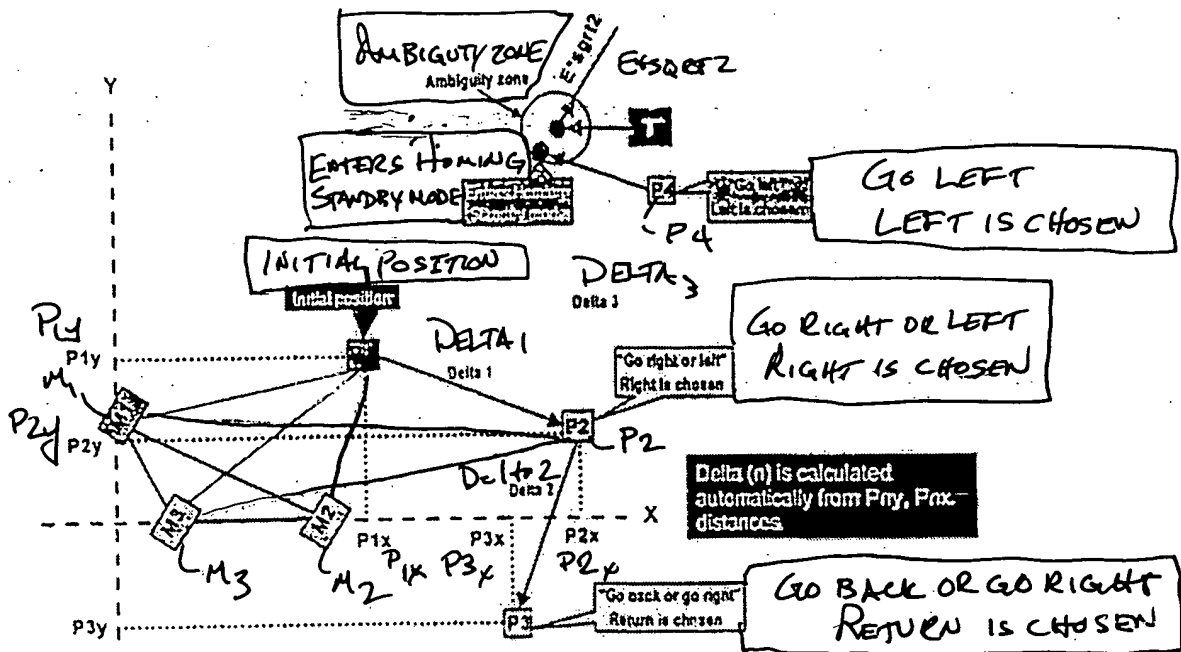


FIG. 21

homing. Three stationary child devices reference example, continued
(obstacle avoidance/bypassing)

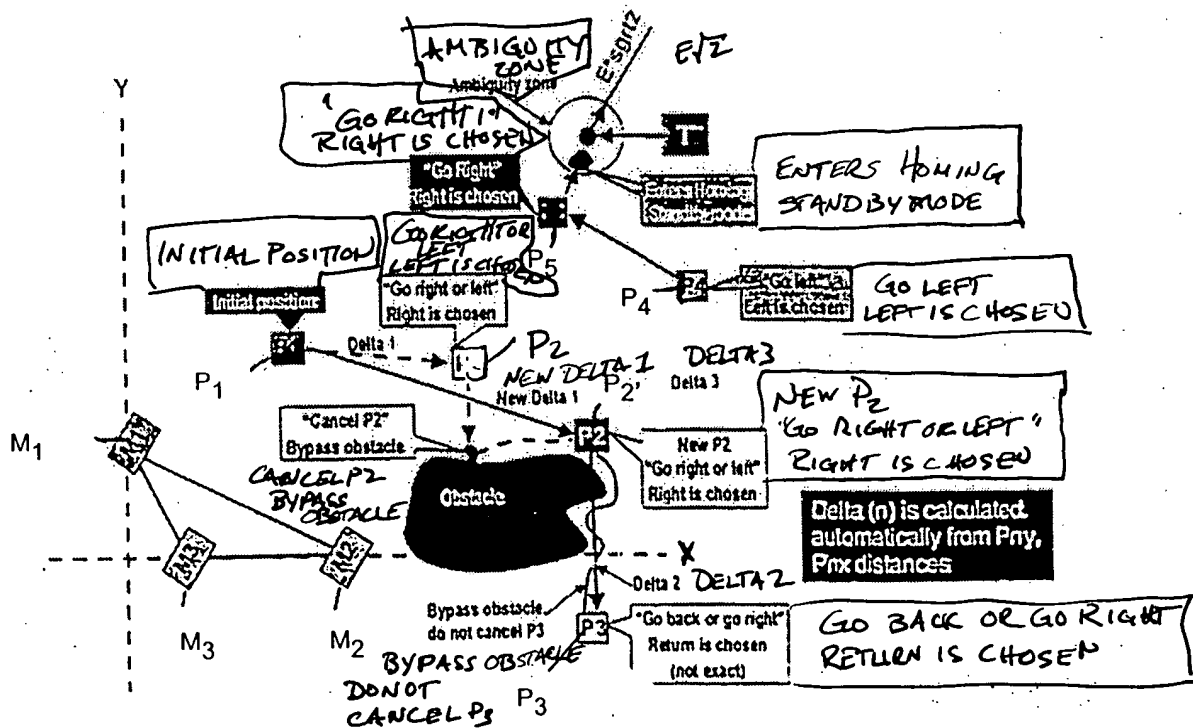


FIG. 22

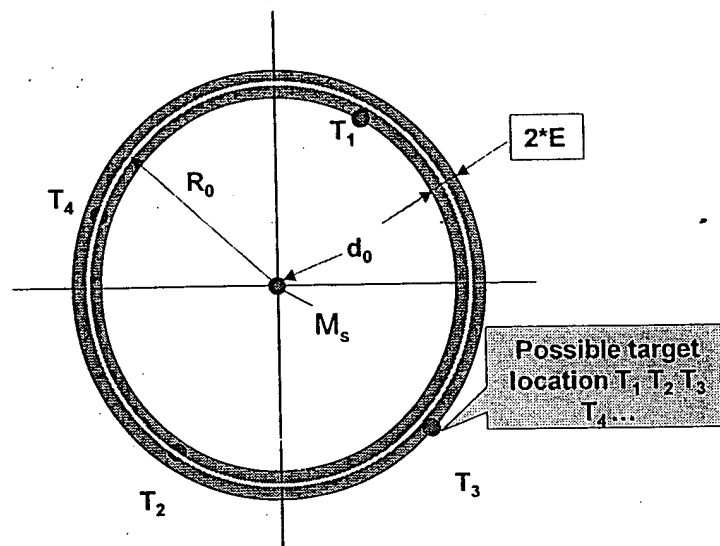


FIG. 23

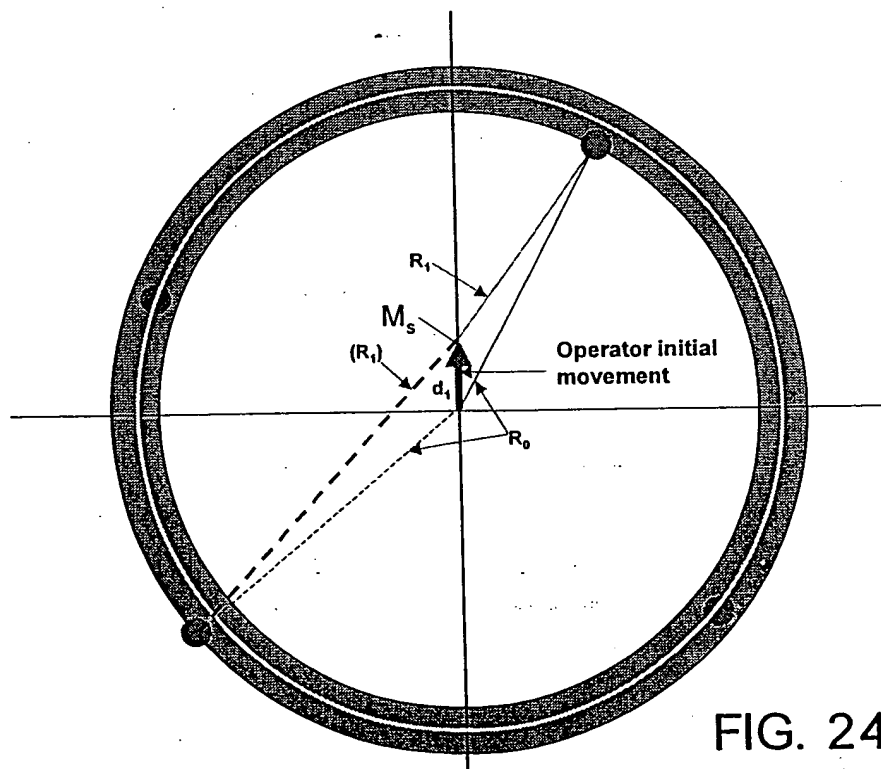


FIG. 24

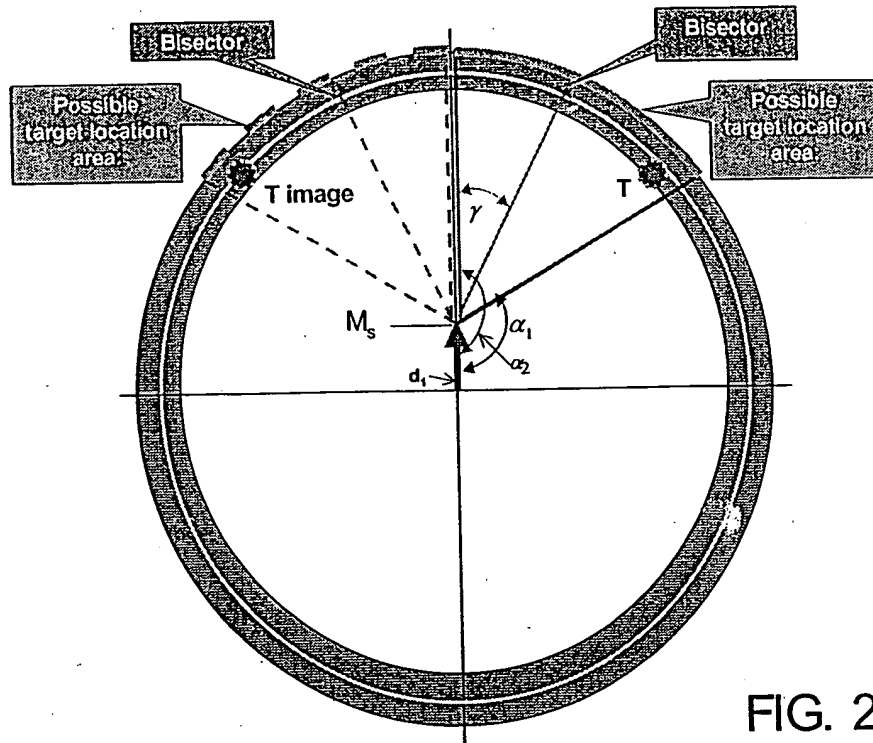


FIG. 25

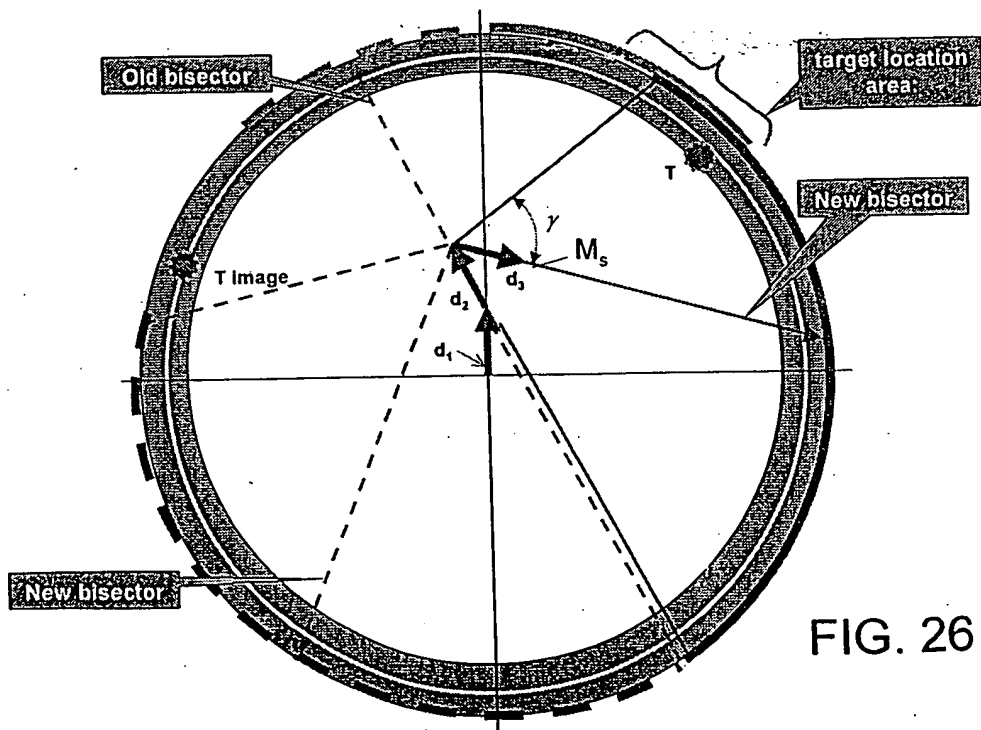


FIG. 26

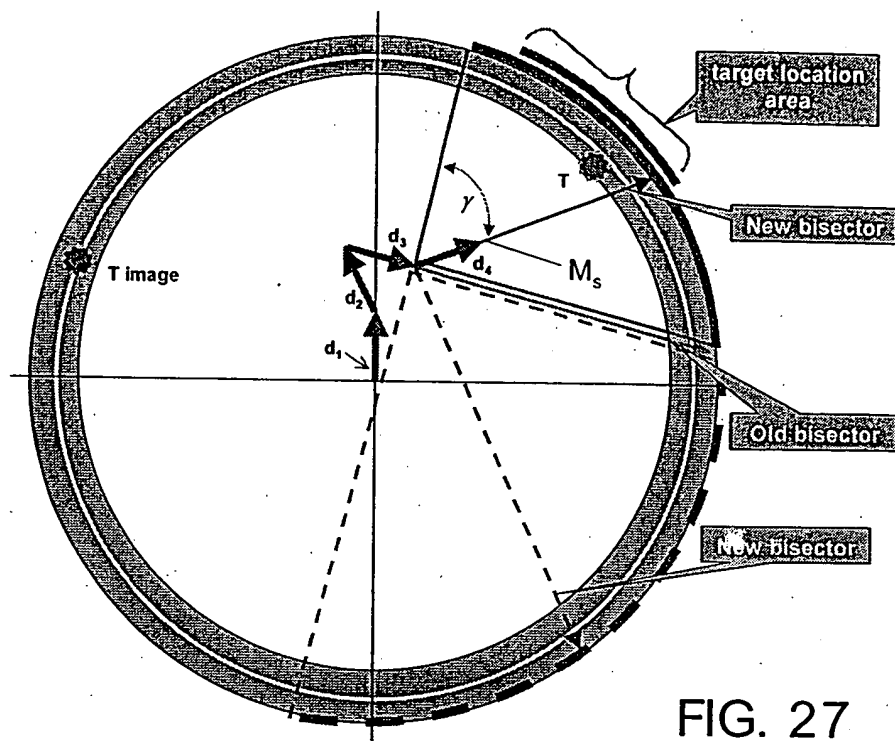


FIG. 27

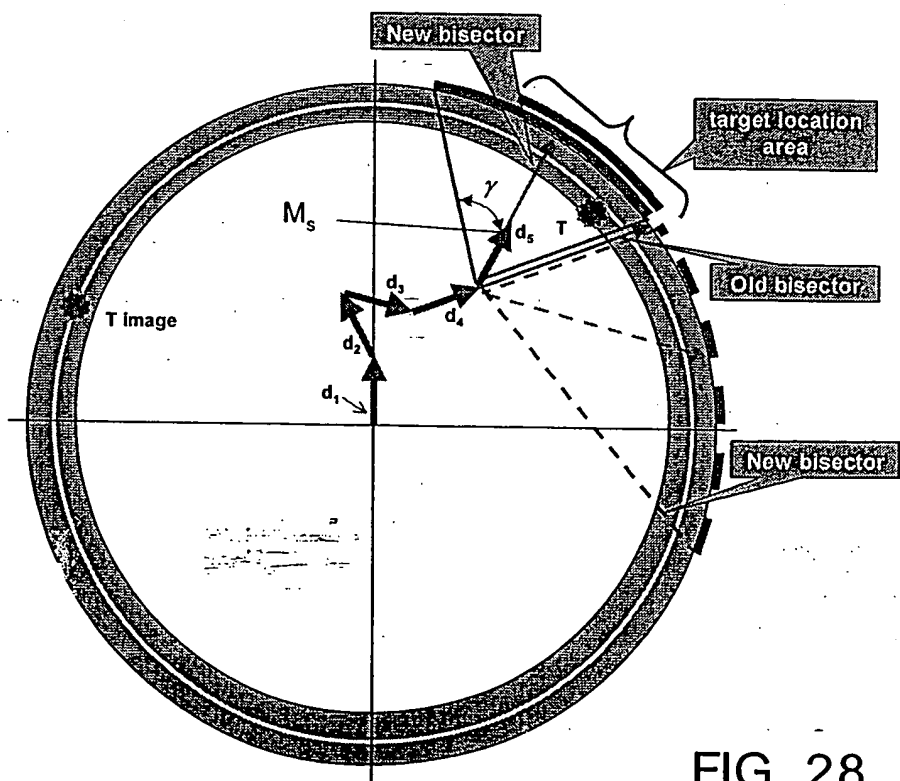


FIG. 28

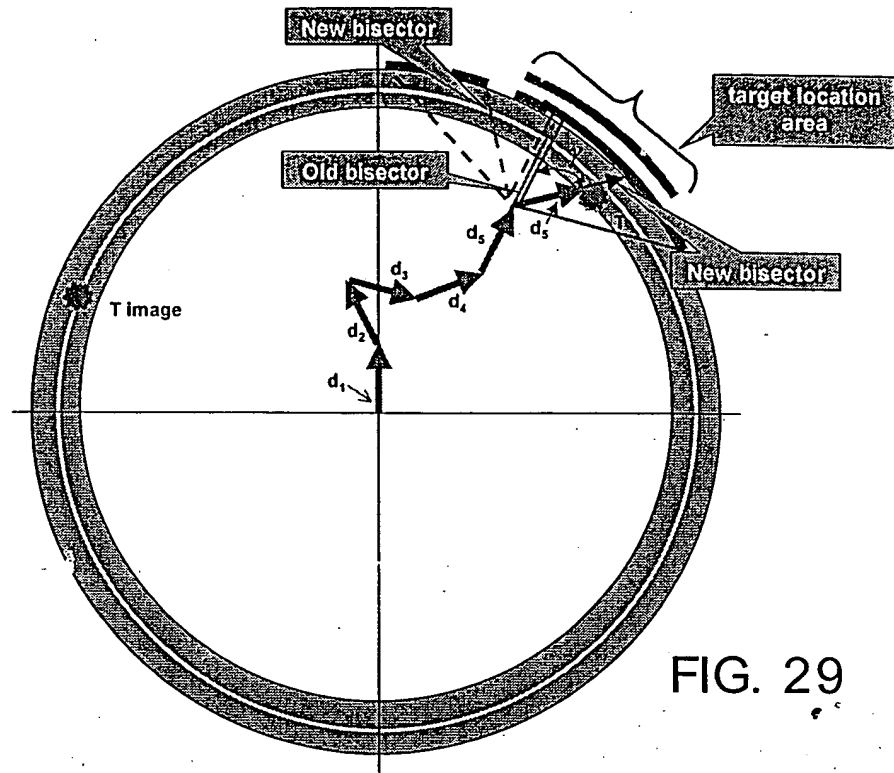


FIG. 29

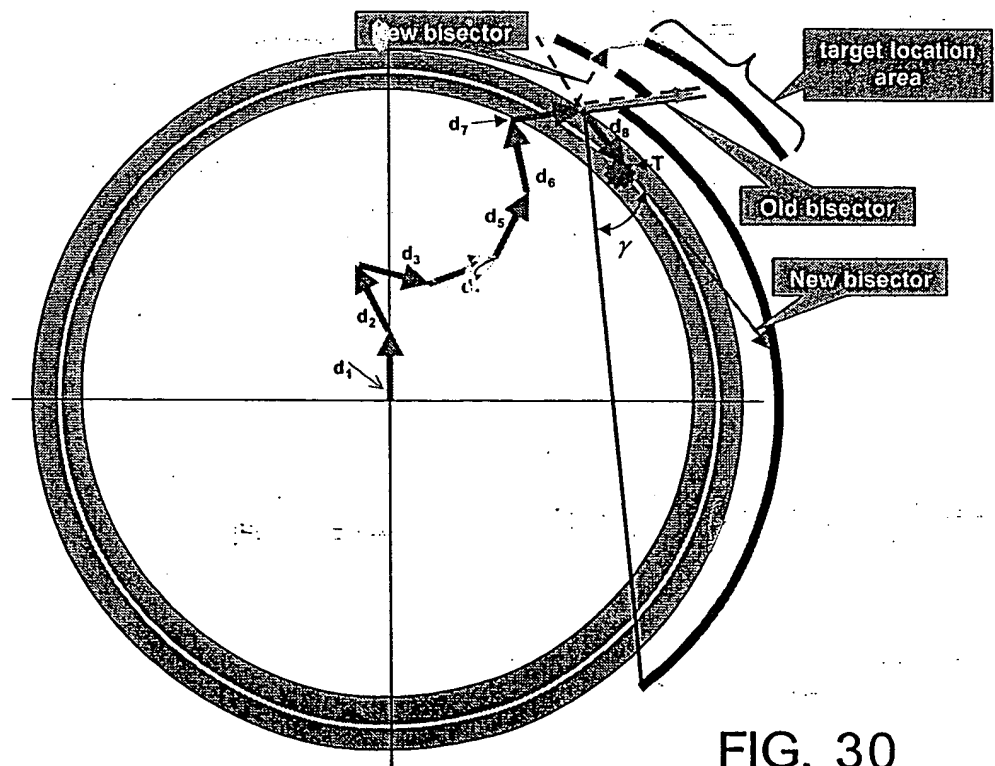


FIG. 30

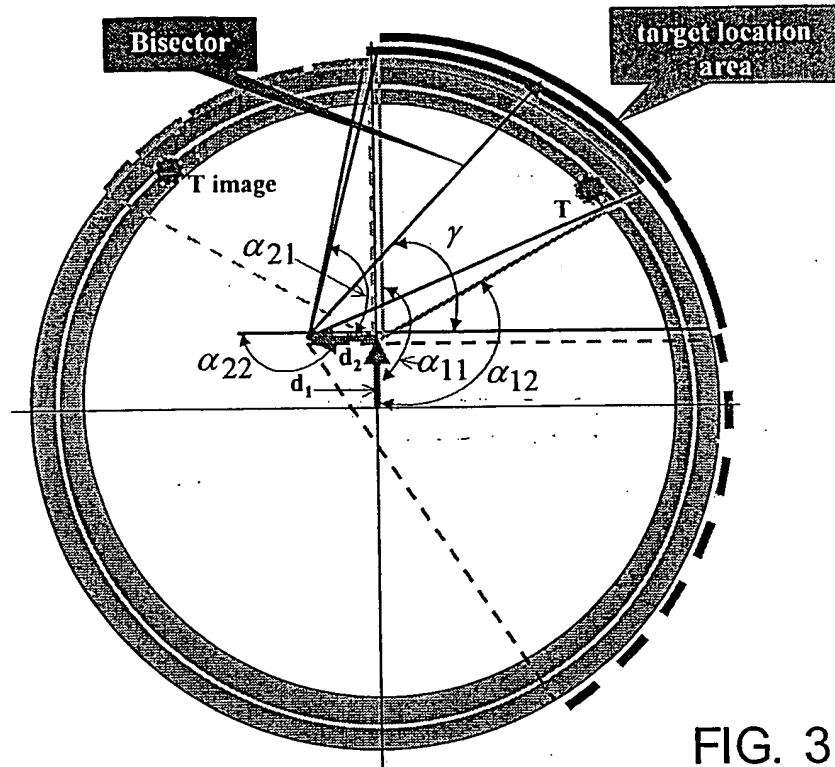


FIG. 31

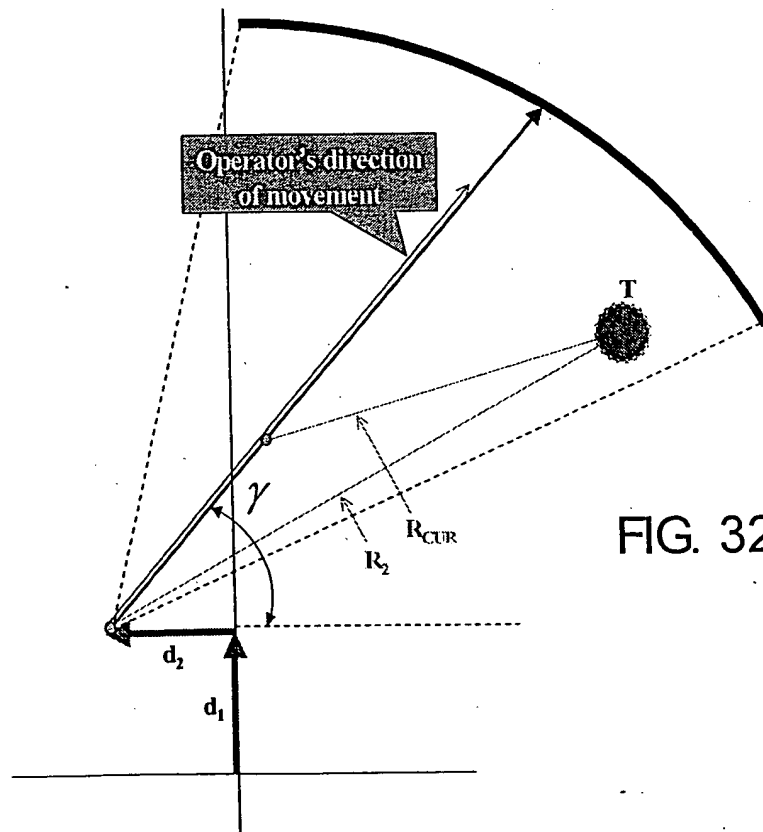


FIG. 32

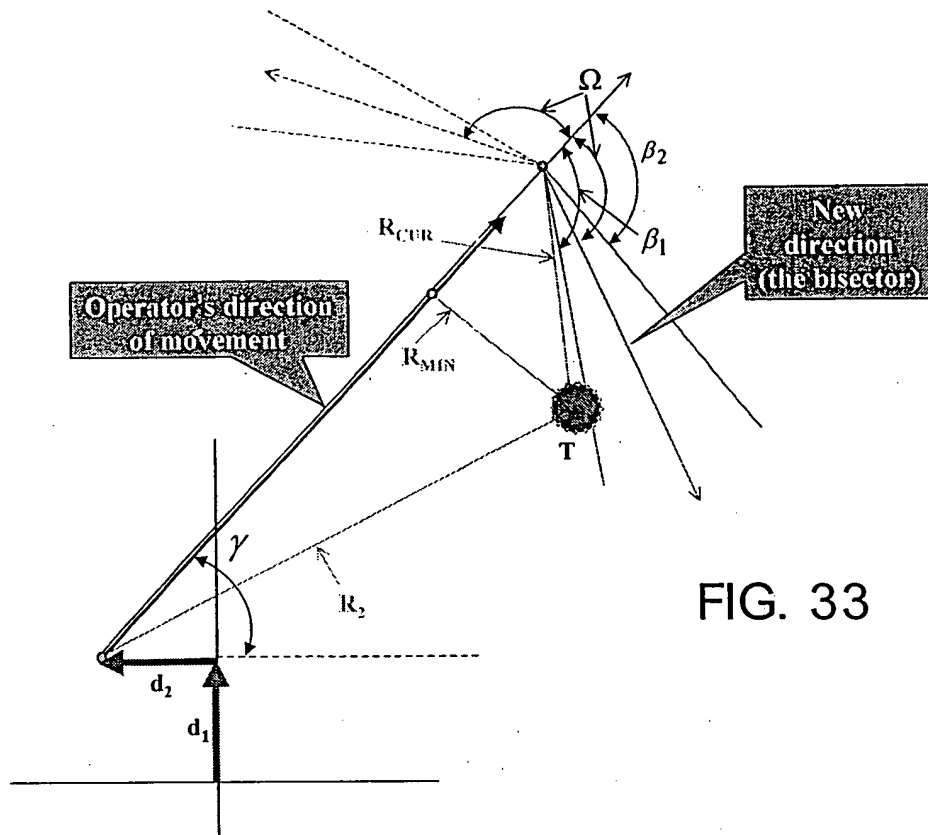


FIG. 33

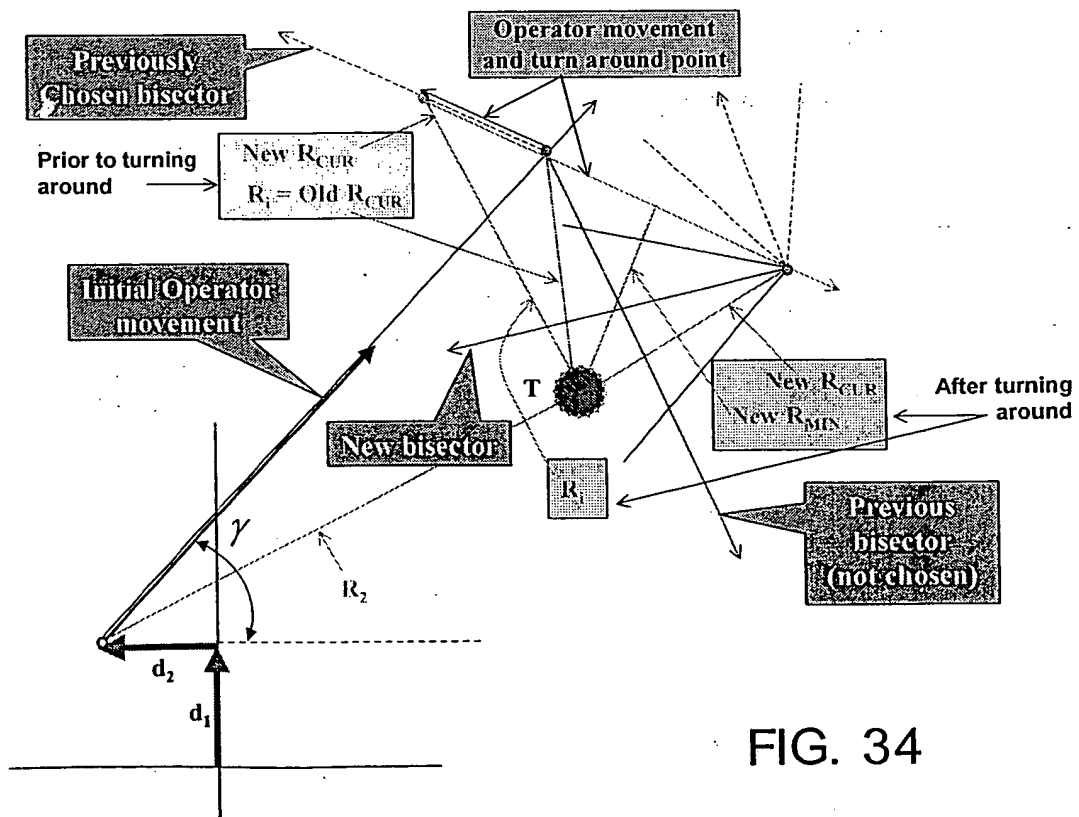


FIG. 34

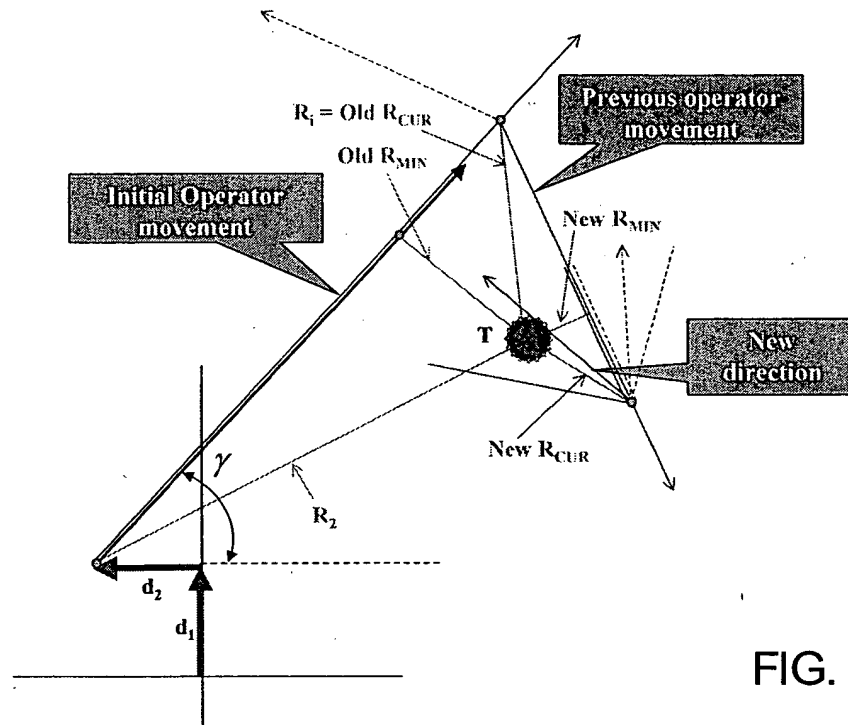


FIG. 35

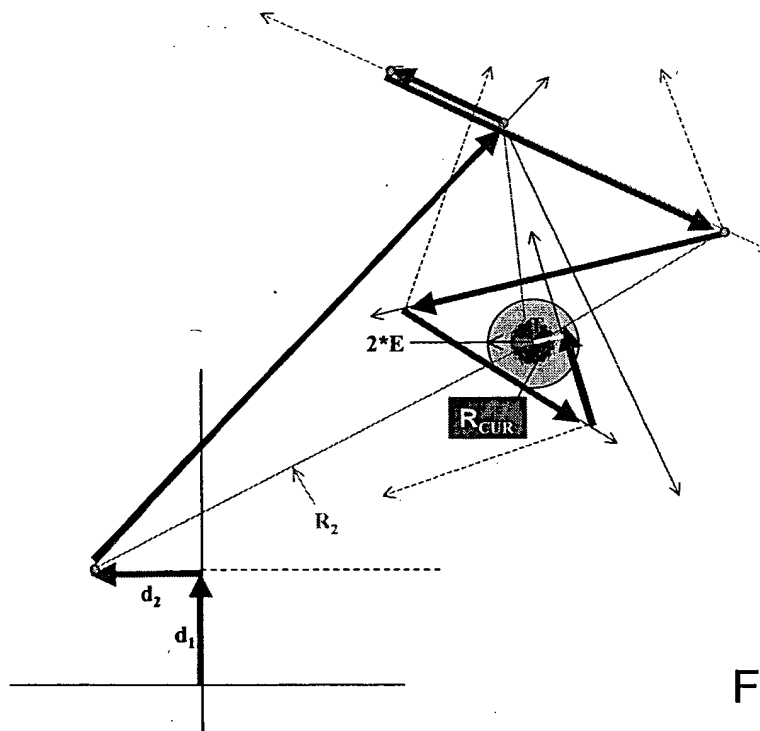


FIG. 36

29/30

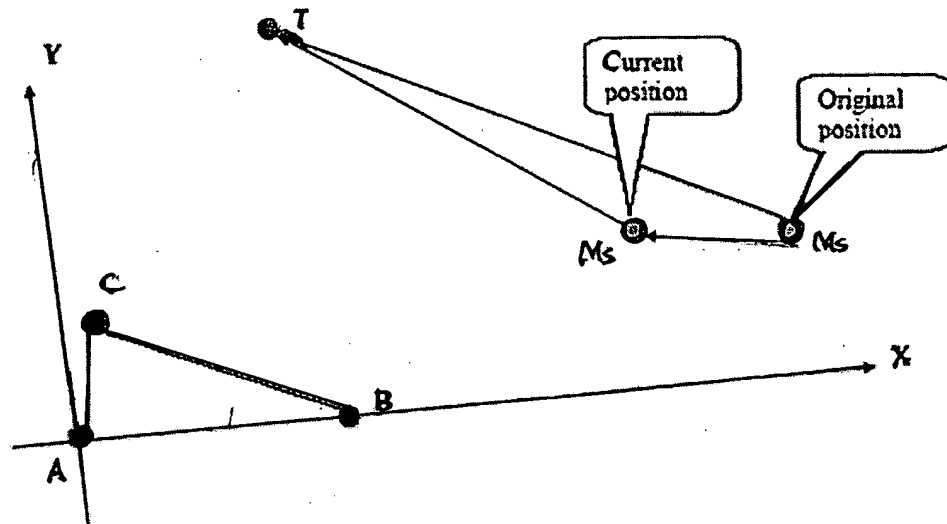


FIG. 37A

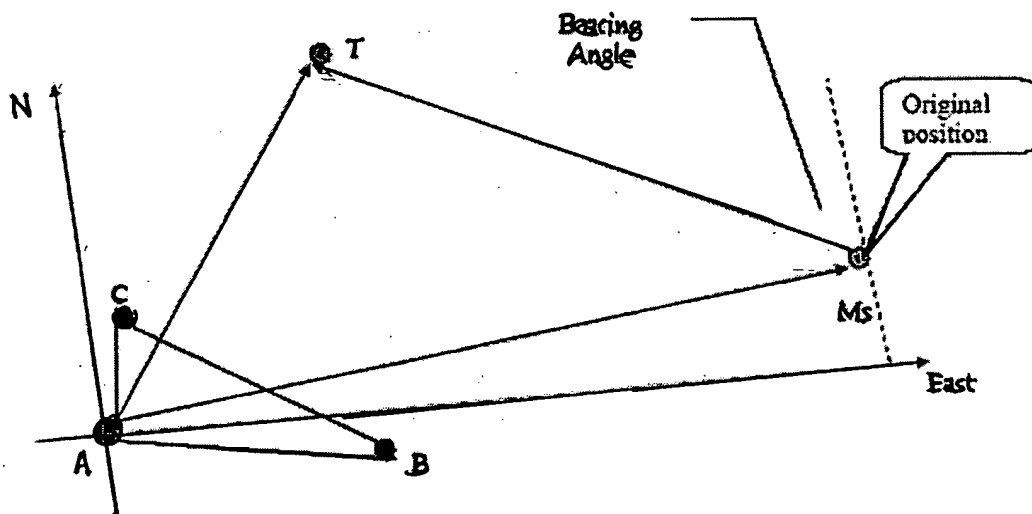


FIG. 37B

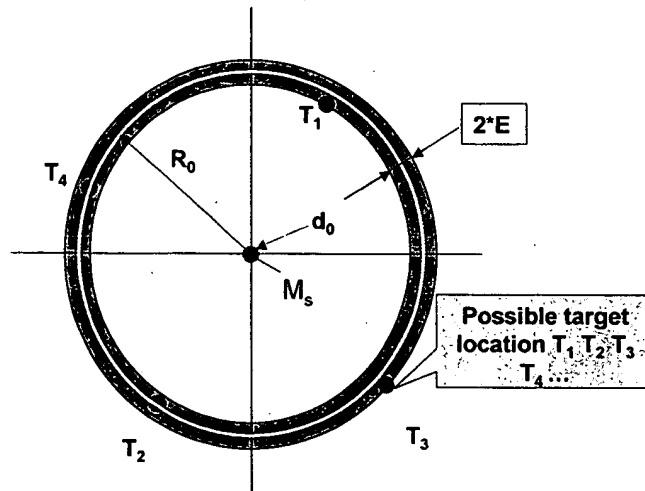


FIG. 23

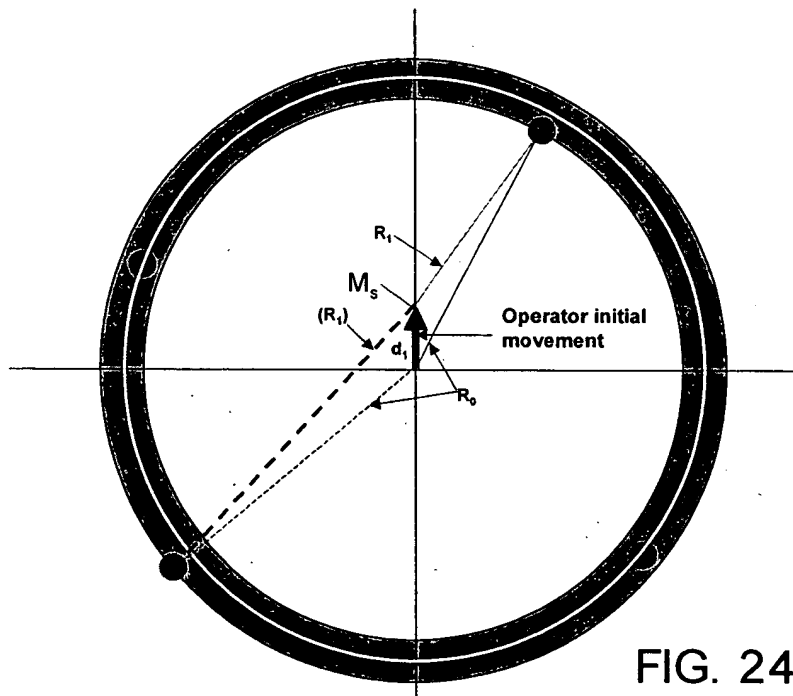


FIG. 24

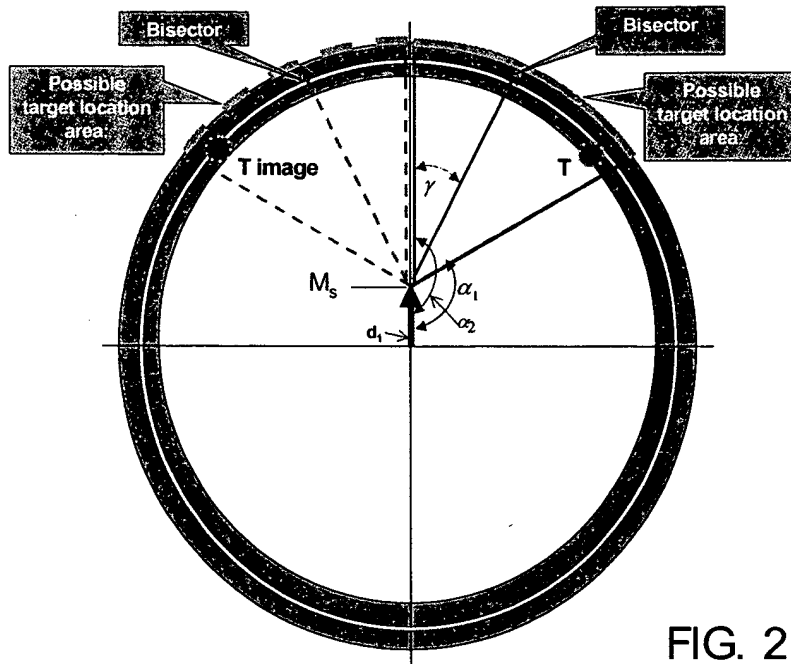


FIG. 25

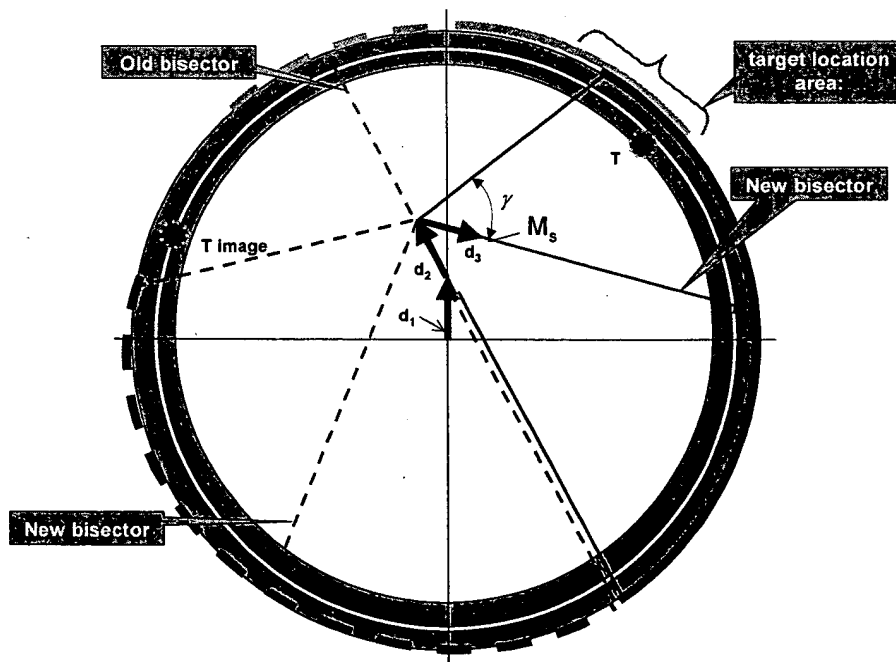


FIG. 26

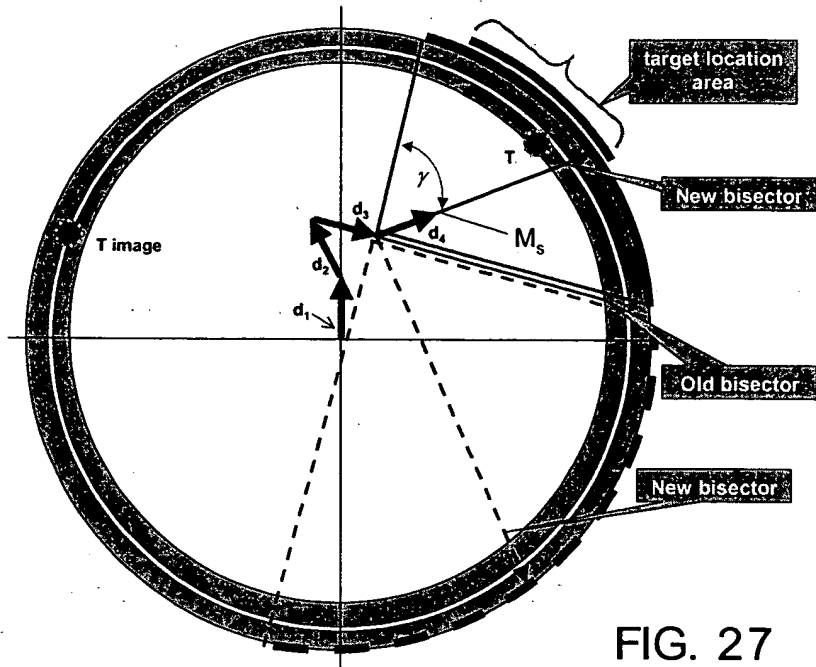


FIG. 27

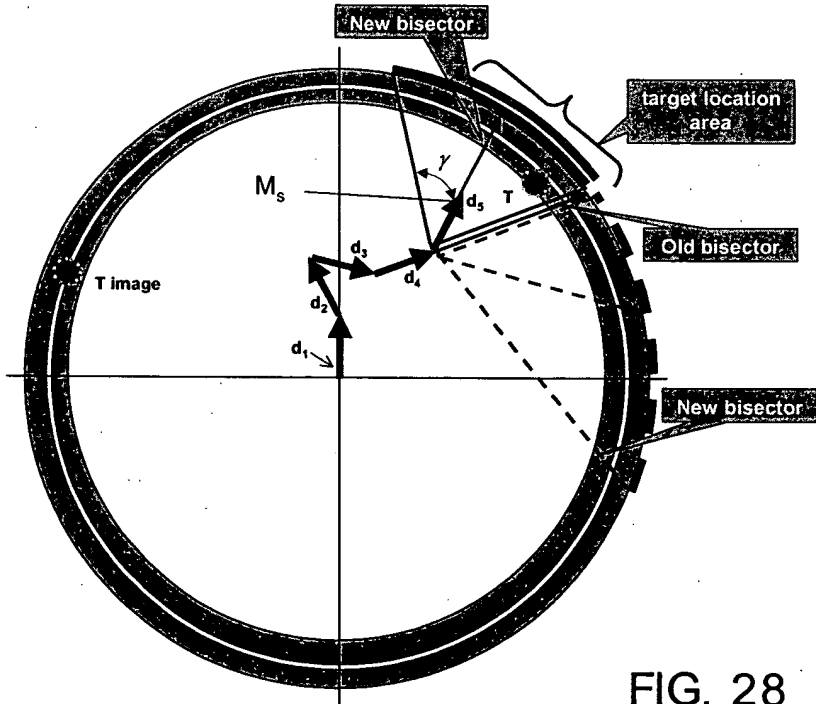
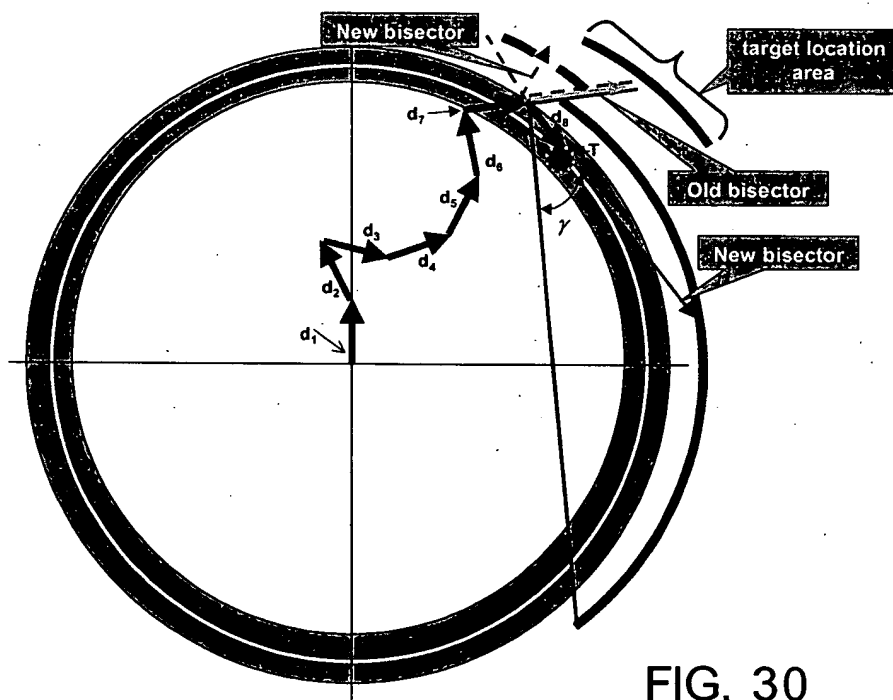
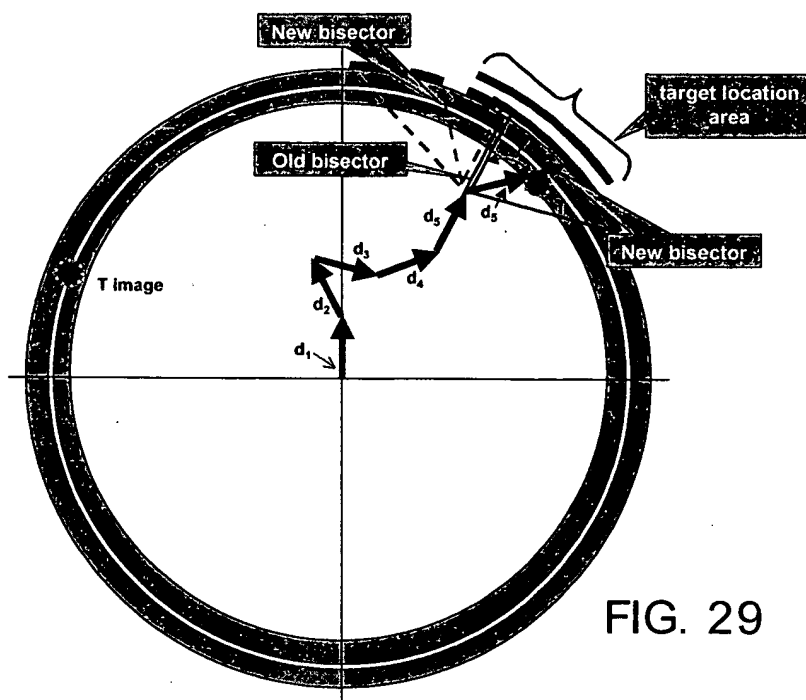


FIG. 28



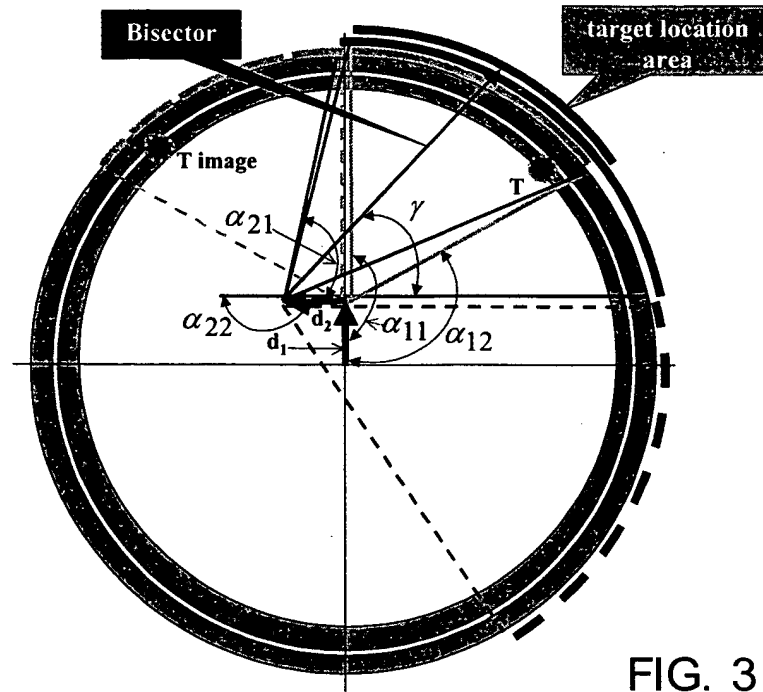


FIG. 31

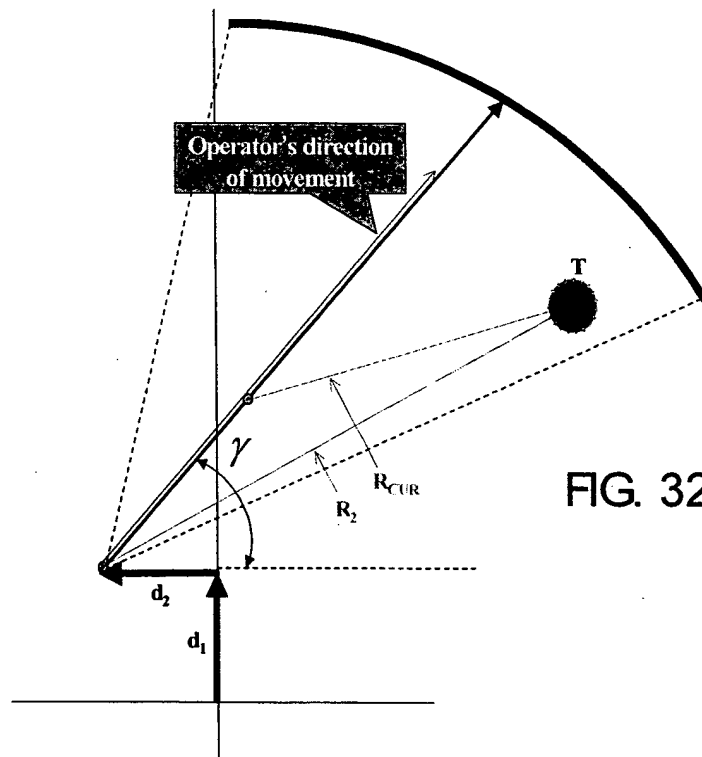


FIG. 32

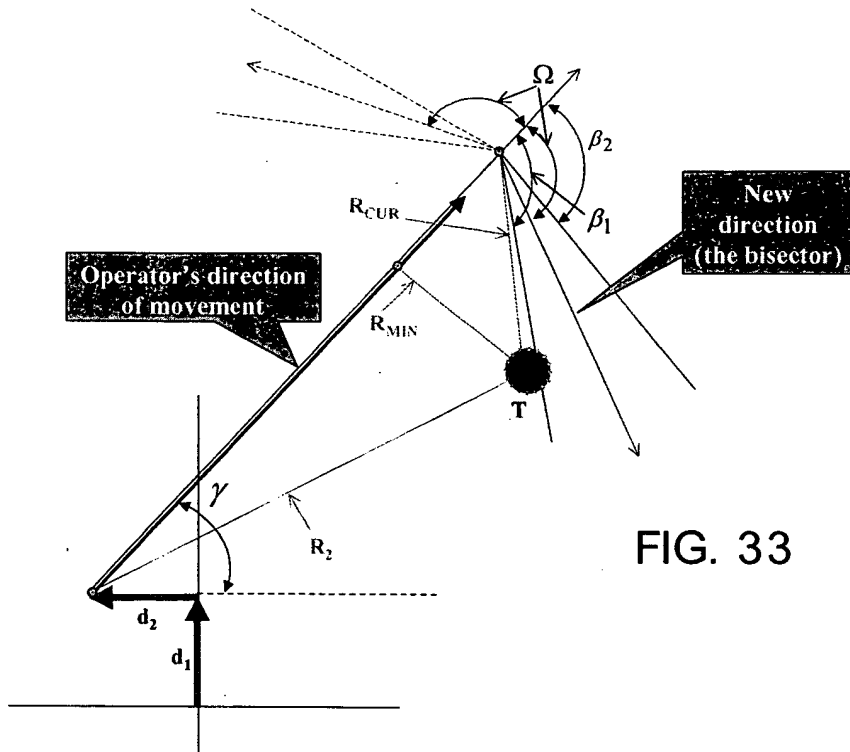


FIG. 33

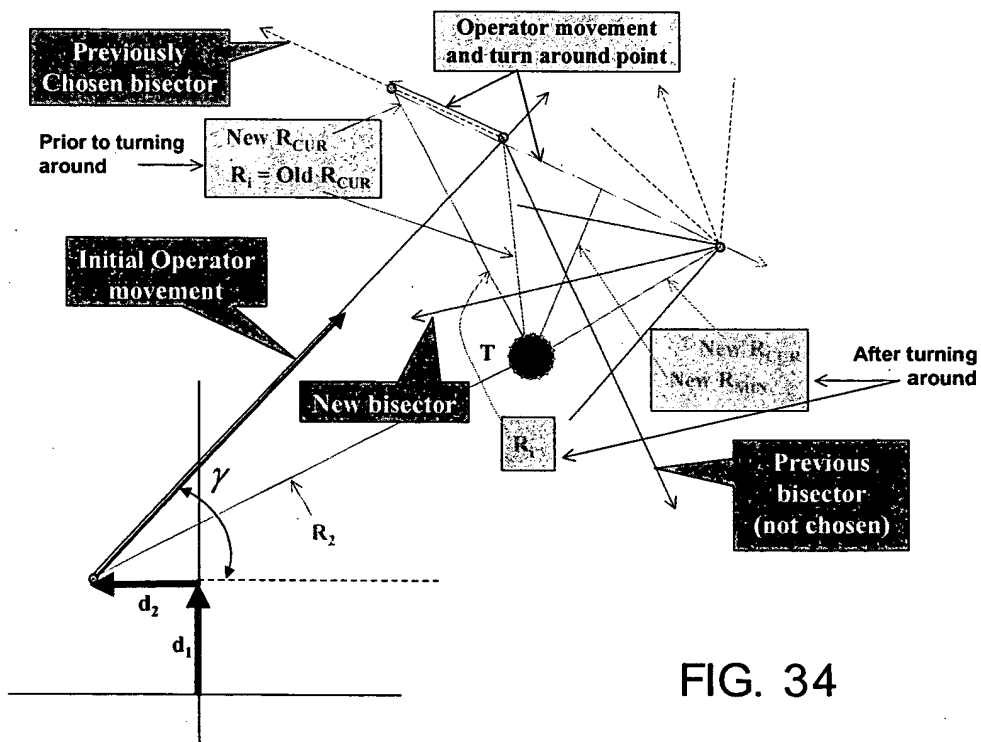


FIG. 34

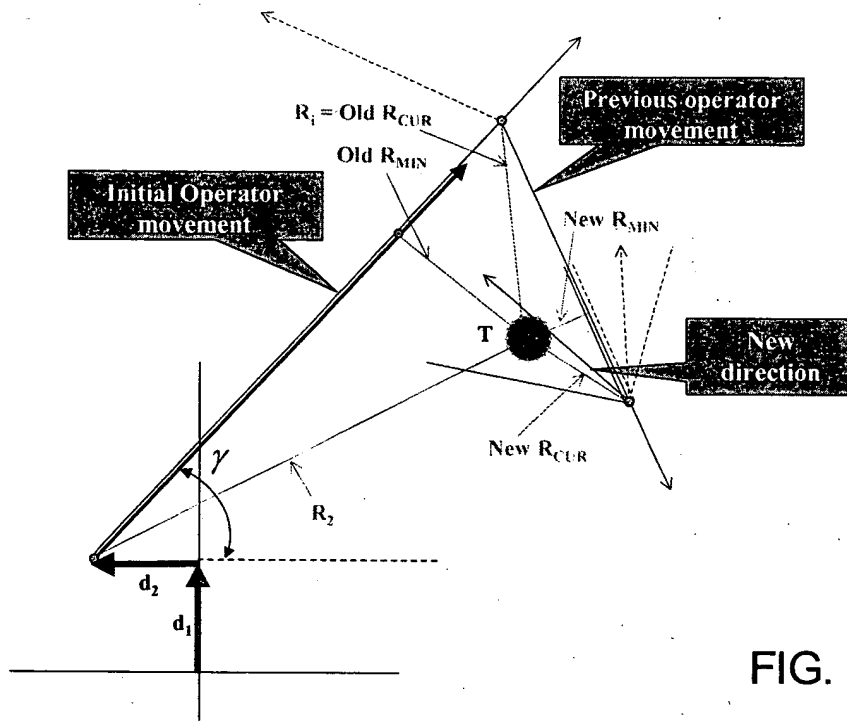


FIG. 35

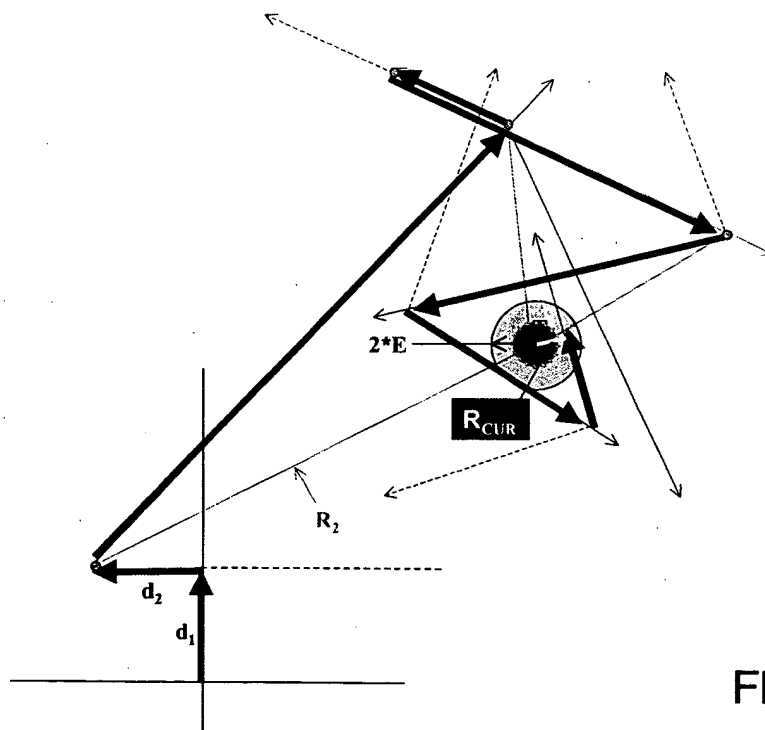


FIG. 36

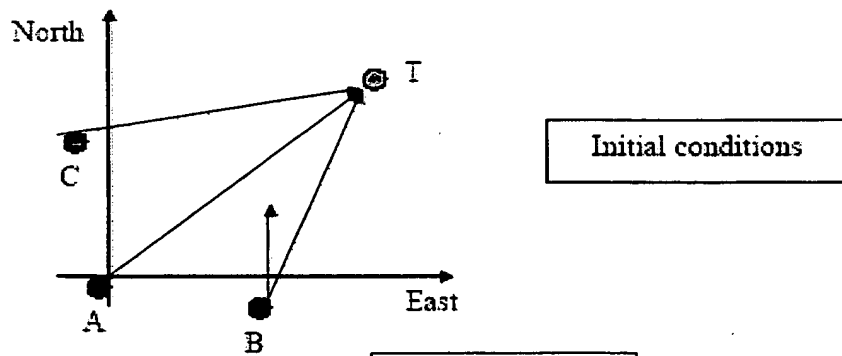


FIG. 38A

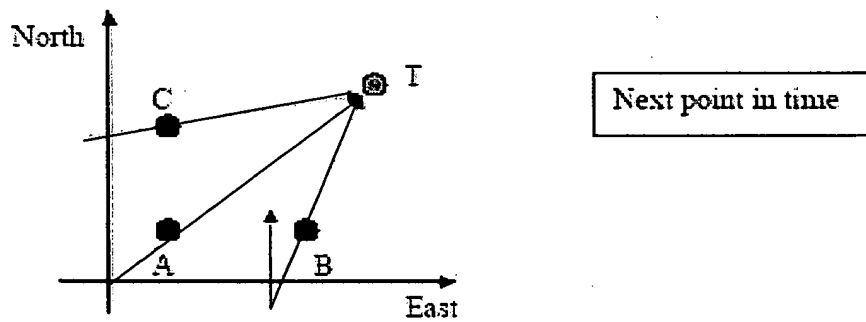


FIG. 38B

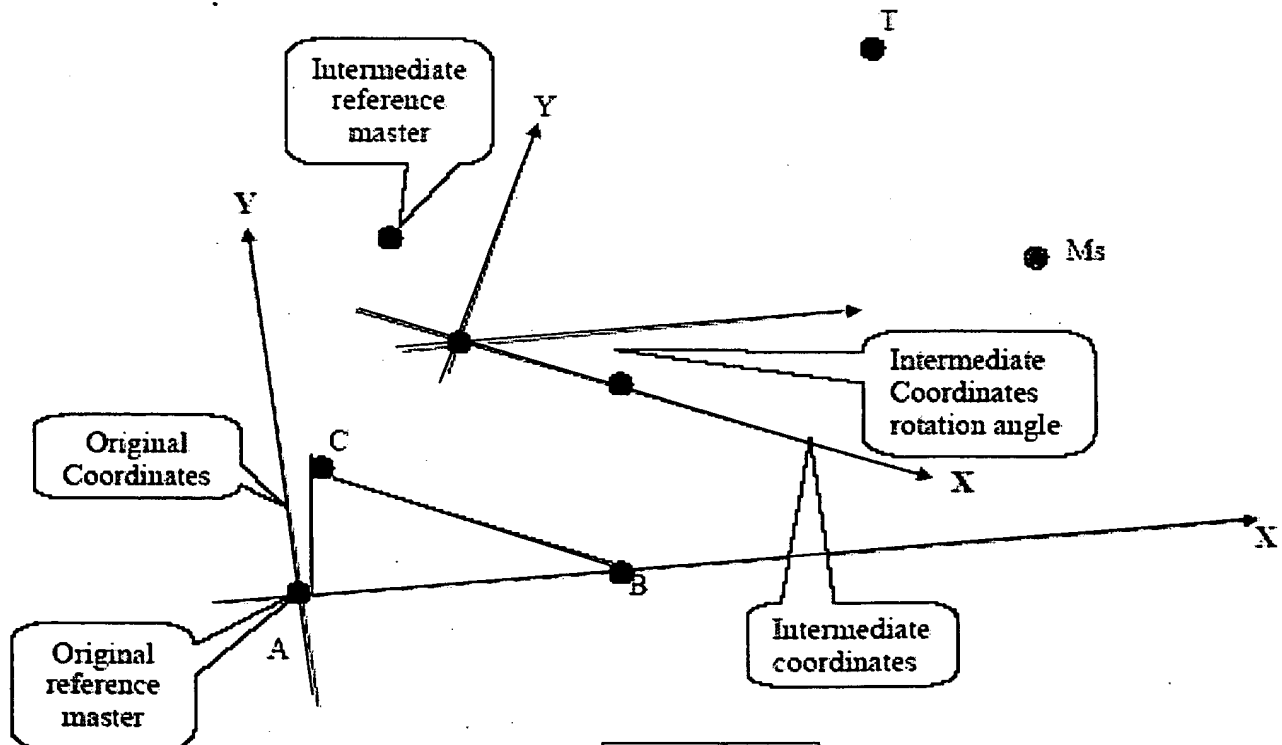


FIG. 39

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